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Worldwide Report

**TELECOMMUNICATIONS POLICY,
RESEARCH, AND DEVELOPMENT**

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1 July 1985

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

CONTENTS

WORLDWIDE AFFAIRS

Briefs	
Ericsson Equipment to Indonesia, Iceland	1

ASIA

PEOPLE'S REPUBLIC OF CHINA

Overview of New Shanghai Digital Telephone System (Yi Shui; Shanghai XIANDAI TONGXIN, No 4, 8 Apr 84)	2
Design of a Ground-Plane Omnidirectional Antenna for a Main Station (Wang Guocai, Xiao Yongcheng; Beijing DIANZI JISHU YINGYONG, No 9, 25 Sep 84)	8

PHILIPPINES

Crony-Owned Domestic Satellite Owes \$2.4 Million (Ben Evardone; Quezon City ANG PAHAYAGANG MALAYA, 25 Apr 85)	15
---	----

SOUTH KOREA

Briefs	
Digital Exchanges From Ericsson	16

VIETNAM

Briefs	
Communications Cable Network	17

EAST EUROPE

BULGARIA

Radio Marti: 'Most Insolent Interference' (Sofia TRUD, 23 May 85)	18
--	----

GERMAN DEMOCRATIC REPUBLIC

TV Satellites, Data Banks Scored as Economic Weapons (East Berlin HORIZONT, No 1, Jan 85; Bonn RHEINISCHER MERKUR/CHRIST UND WELT, 23 Feb 85)	20
Threatening National Sovereignty, by Willi Paubel, Gerhard Haensel	20
FRG Commentary, by Reiner Roebbing	22

LATIN AMERICA

BRAZIL

Military Uses of Electronics Firm's Products Discussed (Sergio Garschagen; Sao Paulo GAZETA MERCANTIL, 20- 23 Apr 85)	24
National Informatics and Automation Plan Discussed (Gladston Holanda; Brasilia CORREIO BRAZILIENSE, 11, 12 May 85)	26
Incentive Plan	26
Goal Is Technological Autonomy	27
Ministers Say Foreign Investments Welcome (Edwin Taylor; Rio de Janeiro LATIN AMERICAN DAILY POST, 5 Jun 85)	31
Briefs	
Brasilsat I Operational	33

COLOMBIA

Liberal Institute Says Satellite Orbit Violates 1979 Code (Bogota EL TIEMPO, 13 May 85)	34
--	----

NEAR EAST/SOUTH ASIA

BANGLADESH

Minister Opens New Automatic Telephone Exchange (Dhaka THE NEW NATION, 16 May 85)	36
--	----

INDIA

Communications Minister Tells Plans for Network (Calcutta THE STATESMAN, 27 Apr 85)	37
Alcatel Director Discusses Indian Operations (Bombay THE TIMES OF INDIA, 25 Apr 85)	38
Telecom Improvements Planned for South Described (Madras THE HINDU, 18 May 85)	40
Rajya Sabha Discusses Broadcasting, Media Policy (Madras THE HINDU, 9 May 85)	41
Briefs	
Optical Fiber Plans	43
Computer Center Plans	43
Advanced Telecom System	43
Accord With France	44
INSAT Circuit Use	44
Plans for Radio	44

OMAN

Briefs	
Rural Telephone Net From Ericsson	46
Digital Phone Exchanges From Ericsson	46

PAKISTAN

Briefs	
Satellite Link With Turkey	47

SUB-SAHARAN AFRICA

INTER-AFRICAN AFFAIRS

PANA Director General Addresses IGC Session (Dakar PANA, 29 May 85)	48
PANA Session Concludes; Resolutions Approved (Dakar PANA, 31 May 85)	50
Zairian, Zambian Ministers on Value, Role of PANA (Dakar PANA, 29 May 85)	53

MOZAMBIQUE

Cooperative Agreement Signed With Hungarian TV (Maputo NOTICIAS, 11 Apr 85)	54
--	----

NIGERIA

- Kano State Launches FM Radio Station
(Musa Ilallah; Kano SUNDAY TRIUMPH, 21 Apr 85) 56

- Briefs
'Monopoly' of Media Scored 57
'Digital Network' 57

SAO TOME AND PRINCIPE

- Briefs
Enatel Hopes To Improve 58

SENEGAL

- Telecommunications Service To Be Restructured
(Paris AFP, 12 Jun 85) 59

SOUTH AFRICA

- Briefs
Satellite for Television Broadcast 60
3 New TV Transmitters 60
Educational TV 60

USSR

- 20 Years of Satellite Broadcasting Marked
(G. C. Kudryavtsev Interview; Moscow GOVORIT I POKAZYVAYET
MOSKVA, No 20, 8 May 85) 61

- Deputy Minister on Satellite Communications
(Yu. B. Zubarev Interview; Moscow SOVETSKAYA ROSSIYA,
7 May 85) 66

- Official Views UN Communications Development Program
(Anatoly Karasikov; Moscow MOSCOW NEWS, No 14, 14-21 Apr 85) 69

WEST EUROPE

EUROPEAN AFFAIRS

- Efforts To Merge ITALTEL, CIT Alcatel, Siemens, Plessey
(Rome IL TEMPO, 26 Jan 85) 72

FINLAND

Agency To Participate in European Cost-214 Project (Helsinki UUSI SUOMI, 26 Mar 85)	74
Government Acting To Revive Tele-X Project (Helsinki HELSINGIN SANOMAT, 4 May 85)	76
Debate Over Tele-X Funding, Advantages Continues (Riitta Anttikoski; Helsinki HELSINGIN SANOMAT, 2 Jun 85)	78

NORWAY

Telecommunications Agency Soon Self-Financed (Oslo AFTENPOSTEN, 14 May 85)	83
Computer Firms Oppose Government Agency Role in Sector (Ulf Peter Hellstrom; Oslo AFTENPOSTEN, 28 May 85)	84

TURKEY

Briefs	
TV Transmitter in Rize	86
Ozal Supports Private FM Stations	86

WORLDWIDE AFFAIRS

BRIEFS

ERICSSON EQUIPMENT TO INDONESIA, ICELAND--Ericsson Radio Systems has received an order from Indonesia valued at 200 million kronor. Ericsson is to expand the mobile telephone system in the capital city of Jakarta. In addition the company has won an order from Iceland valued at 16 million kronor. The company has also signed a delivery agreement for Volvo and Saab Scania. The order value for 1985 is 20 million kronor. [Text] [Stockholm DAGENS NYHETER in Swedish 3 Jun 85 p 10]

CSO: 5500/2652

PEOPLE'S REPUBLIC OF CHINA

OVERVIEW OF NEW SHANGHAI DIGITAL TELEPHONE SYSTEM

Shanghai XIANDAI TONGXIN [COMMUNICATIONS TODAY] in Chinese No 4, 8 Apr 84
pp 4-6

[Article by Yi Shui [2496 3055]: "Shanghai's Digital Telephone Network and the S-1240 Program Controlled Exchange"]

[Text] At the same time that China is importing the production assembly line for the Belgian BTM company's S1240 digital program controlled exchange, it is also importing tens of thousands of S1240 exchanges (S1240 hereon), one portion of which will be installed in Shanghai for use by 1985. This article speculates on the effect on Shanghai's telephone network after the S1240 goes into operation, as well as provides a concise introduction to the technical performance of the S1240.

The Effect on Shanghai's Telephone Network

1. Will form a preliminary digital network: at present the Shanghai telephone communications network is analog, all exchange equipment is analog, and the great majority of transmissions is also analog, as there are few digital transmissions. Tens of thousands of S1240's will form a digital network to be used in Shanghai, and since the S1240 is a completely digital equipment, when several S1240 exchanges are dispersed throughout the city, communication between them will be completely on a digital basis. But S1240's will also communicate with existing analog networks by means of digital transmissions. All of this will create a digital network within the Shanghai telephone network that continues to coexist with the analog networks. This digital network is of course preliminary, but is certain to gradually expand.

The preliminary composition of the Shanghai telephone communications Integrated Digital Network (IDN) will form the basis for the later Integrated Service Digital Network. Also, because digital communications can greatly improve sound quality and quantity, after the S1240 is put into use in Shanghai there will be great improvement in the current situation existing in the Shanghai telephone network where low volume sound that cannot be heard is quite a headache.

2. Will greatly strengthen international and domestic long distance communications capability: because we will establish a S1240 international exchange in Shanghai, when that is in operation, all S1240 subscribers will be able to dial international calls direct, just by dialing "00"- "I"- "B". The "00" is the international prefix; "I" is the country (or region) code. According to CCITT regulations, each country (or region) has its own code; "B" is the domestic telephone code of the subscriber who is called. We must explain here that after the S1240 international exchange is in operation, telephones that are currently in use (i.e., non-S1240 subscribers) will not be able to direct dial internationally, but the S1240 will extend throughout the city by far-end exchanges, basically covering the entire city. Therefore, those units throughout the city needing to make direct dial international calls can apply for the installation of this kind of equipment. Sometimes it will be necessary to dial a 10 digit code when making international calls; to lessen the trouble one may change to push-button phones, for pushing buttons is much more convenient than dialing. S1240 subscribers and those subscribers already currently using crossbar exchanges can also dial "103" for semi-automatic calling. By dialing "103" and telling the operator the number you wish to call, the operator can then quickly put the call through for you.

With the S1240 in operation and the automatic and semi-automatic international communications discussed above in use, the original international calling manual registry will continue to be maintained, and any user in the city will be able to make international calls via manual registry.

International incoming calls will pass through an S1240 international exchange to any subscriber in the city, or can be switched to any subscriber with an automatic phone in major domestic cities.

On the subject of long distance domestic communications, there are at present only a few subscribers in Shanghai with the authority for direct dialed calls to some domestic cities, so the majority must still go through manual registry ("113"). After the S1240 is in operation, S1240 subscribers and current crossbar exchange subscribers with authority can dial "0"- "x₁ x₄"- "PQABCD" to be connected with subscribers in several domestic cities. The "0" is a domestic long distance prefix; "x₁ x₄" is a domestic area code, but note that the domestic area code is not an equal number of digits, so therefore may be "x₁ x₂" or "x₁ x₃", as for example where Beijing is 01, Nanjing is 025, etc. PQABCD is the phone number in the city being called (this might be from four to six digits, and in the future will be seven).

The domestic long distance semi-automatic calling code is "173," so S1240 and crossbar subscribers can dial "173" for semi-automatic connections in domestic long distance calling.

Incoming domestic long distance will be put through to any subscriber in the city via the S1240. After the S1240 is in service, the "113" domestic long distance manual registry will be maintained, and any subscriber in the city can still manually make a domestic long distance call.

As can be seen from the above, when the S1240 is in service the capabilities of Shanghai's international and domestic long distance communications will be

greatly extended because of access to complete and semi-automatic international and domestic calling. This will certainly play a great role in the aspects of advancing international friendship and contacts, in bringing prosperity to international commerce, and in stepping up the pace of the four modernizations at home.

3. Will open up many new program controlled services: S1240 is the same as other program-controlled exchanges in having the capability to open up many new services, as for example reduced digit dialing, call transfer, call back if busy, conference calling, wake up service, hot lines, call waiting, etc. There will be everything there ought to be, things too numerous to mention. Because of this, after the S1240 is in operation subscribers to the Shanghai municipal S1240 exchange will enjoy these new services. Some of the new services will be very welcome, like conference calling, which can connect up to four consecutively dialed subscribers for a total of five, counting the one who calls; or, call back when busy, where when the subscriber reaches a busy number he can dial a code and hang up-- when the line called is no longer busy the exchange will automatically call back. This service can save a lot of dialing time when dialing a number that is often busy. There is also wake up service, where the subscriber can contact the exchange by dialed code telling it when the subscriber wants to be awakened. At the determined time the exchange will ring to awaken the subscriber. One can see from this description that use of these new services can play a big role in aspects like making life more convenient, improving communications service, advancing work relations, and advancing the four way modernization.

A Brief Introduction to S1240 Performance

The S1240 digitally programmable exchanges have a new and clever design, have a unique construction, and in comparison with other digitally programmable exchange models have certain definite characteristics. Here is an introduction to some of the chief technical features:

1. Uses modular construction, which is flexible and convenient: the entire S1240 exchange is comprised of several modules, like the subscriber simulation module, the digital trunk module, the clock and signal tone module, the service circuit module, and the computer equipment peripherals module, etc. The number of these modules can be determined by the capacity of the exchange, and can expand and increase along with capacity. This arrangement is very flexible and convenient and can allow the capacity of the exchange to begin small (as with only 60 switches) and get very large (as in 100,000 switches), both of which are economically feasible. Structurally, there are also many forms, like independent exchanges, controlled exchanges, and far-end concentrators. In the aspects of conversation call control, the independent and controlled exchanges are identical, but they differ in maintenance management. The former operates independently, but the latter can only operate through the former. This is chiefly to save high cost, high capacity memory in the controlled exchange, which consequently saves somewhat in the investment in the controlled exchange. The far-end concentrators of the S1240 have a unique style, as they can divide into lag circuits at eight different locations, but capacity cannot exceed 480 switches. As the S1240 develops from small capacity to large capacity it can expand progressively based on

requirements, that is, just by adding modules.

2. Uses a folded digital exchange network: the majority of the digital exchange networks of digitally controlled exchanges use a TST [1] or TSST [2] format, but the S1240 differs from these in using the $(TS)^n$ folded type [3] exchange, where $n=1$ to 4. The characteristics of the folded type exchange network are great flexibility and suitability for both small and large capacity. When $n=1$, that is just one level of a folded network, where exchange capacity is 16 pulse code connections; while, when $n=4$, that is a four level folded network and when also four surfaces are installed, the exchange capacity can reach 8192 pulse code connections. From the smallest capacity to the largest, that can be accomplished solely through adding printed circuit boards and by adding racks for them.

3. Uses completely dispersed control modes: with the majority of digitally controlled exchanges, if there is a CPU, they also use secondary process control. But the S1240 is different from these in not using a CPU, but rather using completely dispersed control, where all of the microprocessors are dispersed among the modules. When the S1240 is a 10,000 switch exchange, there might be 100 or 200 microprocessors dispersed among the various modules. The key to completely dispersed control is in resolving the problems of passing information among the communications links of the hundreds of microprocessors. The S1240 solves this problem rather well. Its technical approach is that connections among all processors are through the digital exchange network, the channels of which are set up via control of the transmitting end microprocessor, where the needed channels are progressively established through constant transmission of information by the transmitting end. This method of control is somewhat like the step-by-step wiring process but it is faster. Ordinarily, setting up a channel takes only 1 to 2 milliseconds. The advantage of dispersed control is that the system can avoid the complete out-off due to CPU blockage, so it is consequently highly safe and reliable. The S1240 adopts a strict arrangement for the dispersion of the hundreds of microprocessors throughout the exchange. Some are designed into functional dispersion, some are arranged into hierarchical dispersion or spatial dispersion, and the S1240 even arranges primary and reserve microprocessors and common stand-by devices according to importance. Its purpose is always to reduce as much as possible the effects of momentary down time on the exchange. In the S1240 at present, all microprocessors are the 16-bit Intel 8086.

4. Uses standard hardware and software interfaces for ease of system development: in the S1240 the interface between each module and digital exchange has a certain standard, and there are standard interfaces between hardware and software. This kind of arrangement is extremely advantageous to future development. Such as when designing new hardware modules or new software functions, no matter how the hardware and software itself is designed everything will be fine as long as the interfaces comply with standards. If we want to develop an Integrated Service Digital Network (ISDN) service in the future, we can completely independently consider the hardware and software because of the interfacing method discussed above. As long as we use standard

interfacing we will be able to connect up with the original S1240 exchange and begin the new service. The situation is the same when adding other new equipment or service.

5. Makes great use of LSI: in comparison with other digital control exchanges, the rack count is somewhat less. Consequently, the machine room area for the S1240 exchanges can be smaller. One of the reasons for the smaller number of racks in the S1240 is the great use of LSI circuits for a high level of integration, which includes some custom LSI circuits. S1240 digital exchange networks were thus built with special IC's, where 16 blocks of IC's are placed on one printed circuit board, which composes a so-called "digital exchange unit" accomplishing the exchange of 16 party pulse code between 512 time intervals. Entire digital networks are composed of this kind of single "digital exchange unit." Since each printed circuit board can complete the exchange of 16 end pulse code within 512 time intervals, we can see the use of using LSI circuits for reducing system bulk. Digital subscribers to the S1240 will now use the rather advanced electronic integrated circuits to accomplish the BORSCHT function, [4] which has advantages over other digitally controlled exchanges. The average digitally controlled exchange will accommodate 6 to 8 subscribers on a printed circuit board and each board is provided with an electromagnetic relay for use in testing, but for those users with certain special features a PC board can only accommodate three or fewer subscribers. But for the S1240 digital subscribers, one PC board can accommodate eight subscribers, which is true no matter what the special features of subscribers. One can see from this the high level of integration for S1240 subscribers, the strong performance, and high degree of electronics.

6. Use of the No 7 common signal command [xin ling 0207 0109]: a common signal command has advantages over random signal commands, as for example quicker speed of transmission, etc. As everyone knows, the No 6 common signal command is used in analog controlled branch program-controlled exchanges while the No 7 common signal command is used in digital branch program-controlled exchanges. The S1240 that will be put into operation uses the No 7 common signal command between digital exchanges. Use of the No 7 common signal command will function well in promoting and accommodating the ISDN that we need to develop from now on. As for the S1240 and analog exchanges currently in use, we will use a multi-frequency mutual control signal command similar to the R₂ signal command system. Connections between the S1240 and international circuits will use the No 5 signal command, and in the future when conditions allow we will transfer to the No 7 common signal command.

7. In addition to the six performance characteristics mentioned above, the S1240 has several other distinguishing features. For example, the programming language CHILL as formulated by the CCITT, that human-machine communications use the MML language drawn up by the CCITT, modular software design, etc. We will not list all features here.

We will give another brief description of the organization of the S1240. The compositional core of the S1240 is the digital exchange network, the smallest capacity is a pair of access connection devices, and the greatest capacity is 512 pairs of access connection devices. Each pair of access connection

devices can accommodate 8 to 16 end pulse code connections. Each kind of module is linked together with the digital exchange network, analog subscriber modules are connected with analog subscriber wiring, and 120 subscribers on each module are connected to the digital exchange network by using two end pulse codes in 60 time intervals. As for digital trunk modules connected to digital trunks between exchanges, each module can connect 30 trunks. In actuality, service circuit modules are multi-frequency coder-decoders, where computer peripheral modules chiefly solve the problems of human-machine communication. We will not discuss each of the other modules. These modules may be divided into two parts, one being terminal, taking care of its own functions, and the other controlling, i.e., microprocessors. In addition to the modules discussed above there is also one called a supplementary controlling unit module connected to the digital exchange network. Because the controlling unit module functions only as a controller it therefore has only a microcomputer portion, no terminal. The supplementary controlling unit also separately calls the control-supplementary control unit and the system supplementary control unit, the level of the latter being higher than the former.

When the S1240 is used as an independent exchange, if it is used solely for connecting subscribers its capacity can range from several hundred to tens of thousands, but because of restrictions in processing power the highest is 100,000; when it is a collecting exchange, the most lines it can connect to the trunk line is about 30,000. When the S1240 is a controlled exchange the capacity is between several dozens to 3000.

- (1) TST type, i.e., "time--space--time" type.
- (2) TSST type, i.e., "time--space--space--time" type.
- (3) (TS)ⁿ type is time and type, i.e., "time--space--time" type.
- (2) TSST type, i.e., "time--space--space--time" type.
- (3) (TS)ⁿ type is time and space combined to the n order folded type.
- (4) The properties of BORSCHT are:
 1. Current feed to subscribers (B)
 2. Protection against voltage overage (O)
 3. Control of ringing and ring out-off (R)
 4. Supervision of subscriber loop status (S)
 5. Coder (C)
 6. 2,4 line hybrid circuit (H)
 7. Circuit testing (T)

12586

CSO: 5500/4142

PEOPLE'S REPUBLIC OF CHINA

DESIGN OF A GROUND-PLANE OMNIDIRECTIONAL ANTENNA FOR A MAIN STATION

Beijing DIANZI JISHU YINGYONG [APPLICATION OF ELECTRONIC TECHNIQUE]
in Chinese No 9, 25 Sep 84 pp 27-29

[Article by Wang Guocai [3769 0948 2088] and Xiao Yongcheng [5135 3057 2052]:
"The Design of a Ground-plane Omnidirectional Antenna for a Main Station"]

[Text] Capsule Summary. This article mainly introduces a VHF frequency band, 2JDD-6 type "ground-plane omnidirectional antenna" for a main station developed by the "Dujiang Dam Administration Bureau of Sichuan Province". Theoretical calculations, analysis and practical surveys of the antenna's electrical characteristics were also carried out. $G_k \geq 7\text{db}$ was the measured antenna gain, and $p \leq 1.2$ was the standing wave coefficient within the range of approximately 5 percent of the bandwidth. Good results were obtained from this antenna which was matched with a 3W transmitter, and communications signals were sent to each substation within a radius of 50 km. Not only is it a good type of ultra-shortwave communications antenna, it is also a rather ideal transmission antenna for a small-scale television broadcasting station.

Foreword. A common vertically positioned, symmetric half-wave dipole antenna (Figure 1) or a grounded, erect whip antenna (Figure 2) is representative of a "vertically polarized omnidirectional antenna", except that its gain is rather low. Because of the needs for the modes of mobile communications, "vertically polarized omnidirectional antennas" are at present still employed as base station antennas in China and abroad. However, the use of this type of antenna can adversely affect communications: (1) it is easily subjected to industrial interference; (2) when vertically polarized waves are propagated, the surface effects are rather large; (3) In order not to disrupt the electric field configuration non-metal materials are required for the struts, and in general rather expensive glass fiber reinforced plastic tubes are used. To explain the aforementioned situation, we will now take as an example the tests of the ultra-shortwave four channel counter ($f = 158\text{--}165\text{ MHz}$) made by our plant. When horizontal polarization antenna communications were employed the error rate was 1×10^{-4} , and once the change was made to vertical polarization antenna communications the error rate deteriorated to 3×10^{-4} . The corresponding signal level degradation was $2\sim 2.5\text{ db}$.

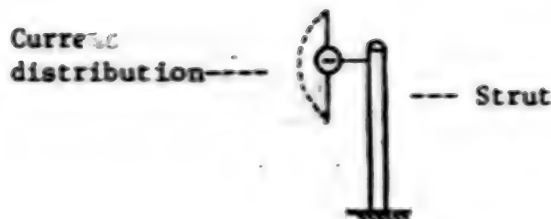


Figure 1.



Figure 2.

In light of the aforementioned existing problems and the rather high sensitivity of the various communications receivers in China at present (in general within $1 \mu V$), various interference signals can easily be picked up by the receivers. In order to improve the anti-jamming capabilities of the equipment and to manually adjust electric wave propagation so as to bring about stable, dependable communications, it is of the utmost importance that horizontally polarized antennas be employed. To this end we developed an ultra-shortwave "ground-plane omnidirectional antenna" for a main station; below are the design analysis, theoretical calculations and results of practical surveys conducted for this antenna.

I. The Design of the Antenna

The performance bandwidth for the two-channel (one channel for telephone, one channel for data, frequency of $50 \sim 600/s$) duplex ultra-shortwave all-directional radiophone relay was rather narrow. The entire device's requirements for the antenna electrical characteristics were: (1) Gain $G_k \geq 7.5$ db; (2) within the range of the frequency bandwidth comparable to $B \leq 5$ percent, a standing wave coefficient of $p \leq 1.4$; and (3) a horizontal pattern spherical radiation rate of ± 1 db. Based on this, the selection of ordinary linear dipole antennas can still satisfy utilization requirements.

Figure 3 is the feeder principle diagram for a dipole-type rotating field antenna. What is called the rotating field is a standard-type antenna composed of two mutually perpendicular short dipoles of 90° phase difference excitation. This 90° phase difference is obtained by the phase difference $\lambda/4$ ($\lambda = \lambda_0/\sqrt{\epsilon_r}$) of oscillating electrons along feeders 1 and 2. Its instantaneous antenna pattern forms a "figure 8", which is the same as the antenna pattern of a single antenna. This "figure 8"-type pattern rotates around the central axis with time increments, which is shown in Figure 4.

The actual antenna is composed of half-wave dipoles, as is shown in Figure 5, and its horizontal pattern is approximately spherical. The factor for its electric field orientation are:

$$E(\theta) = \frac{\cos(90^\circ \cos \theta)}{\cos \theta} \cos \omega t + \frac{\cos(90^\circ \sin \theta)}{\cos \theta} \sin \omega t$$

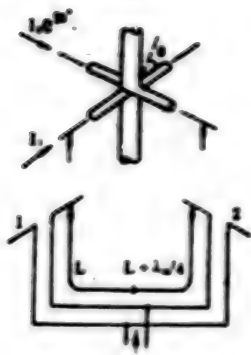


Figure 3

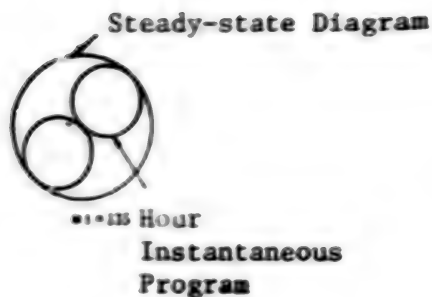


Figure 4

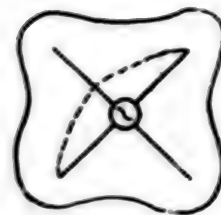


Figure 5

In order to improve antenna gain and to increase the vertical pattern, generally speaking the active elements on a vertical axis such as those in Figure 5 can be placed on top of each other spaced apart by $\lambda/2$ to form the multi-source array shown in Figure 6. The drawbacks of this type of antenna are: (1) the feeder system is complex; (2) it is difficult to align for matching; and (3) the horizontal pattern is also not good (around $\pm 3\text{db}$).

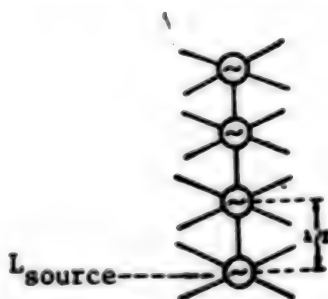


Figure 6

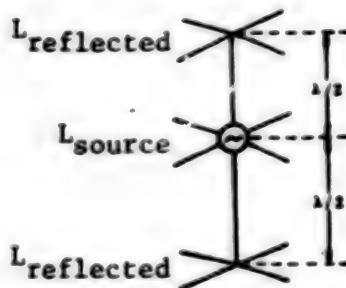


Figure 7

In order to improve the antenna's electrical properties and to simplify the feeder system, we set up above and below L_{source} a passive reflector (network) spaced apart by $\lambda/2$, which formed the antenna in the shape of the character WANG [3769] shown in Figure 7. The antenna pattern is shown in Figure 8.

The advantages of this type of antenna are: (1) it has particular gain; (2) its feeder system is simple; (3) its horizontal pattern is good; and (4) it is convenient to use. When the reflected dipoles change from 4 to 8 beams the antenna gain can still increase $0.6 \sim 0.8\text{db}$, and the omnidirectional spherical radiation improves by 0.5db .

The actual antenna used is a 5-element array shown in Figure 11. We made theoretical calculations of the antenna's gain and input impedance, using a modern processing method for electromagnetic field theory: matrix measuring to obtain the approximate value of the antenna source. Without going into the complex process of the calculations, the value $G_k = 7.5\text{db}$ was obtained by comparing the antenna gain with the non-directional antenna. The antenna input impedance was $58.40 - j22.45\Omega$. In order to be matched with a coaxial cable of 50 ohms characteristic impedance, each element had to be aligned.

Samplings of each element in Figure 11 are as follows: (1) the length of active oscillations L_{source} obtained a suitable $(0.40 \sim 0.47)\lambda$; (2) the length of reflector $L_{\text{reflected}}$ was approximately longer than L_{source} by 8-12 percent. The length of the intermediate common reflector was slightly shorter than a two-port reflector by 2 percent; (3) because of mutual effects among the dipoles the distance between the active dipole and the reflector was not exactly $\lambda/2$; in general it was appropriate to be $(0.40 \sim 0.49)\lambda$.

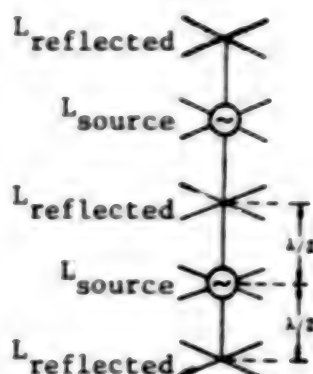


Figure 11. Five Element Antenna Array

In order to improve the matching between the antenna and the electric main, and to reduce insertion loss, we added reactance regulated $\lambda/4$ stubs to the in-phase equal range feeder $\lambda/4$ impedance transforming section. This enabled the antenna to obtain satisfactory matching within the range of 4.5 percent of the relative bandwidth and to obtain a standing wave coefficient of p less than 1.2.

II. Survey Results of the Antenna Electric Characteristic

(1) Survey of Antenna Gain G_k

parameters	$f(\text{MHz})$	224	228	230	234
	$G_k(\text{db})$	7.0	7.3	6.8	6.8

(2) Survey of the Standing Wave Coefficient p

parameters	$f(\text{MHz})$	224	228	230	234
	p	1.2	1.18	1.17	1.23

(3) Survey of the Antenna Pattern

Horizontal pattern

Vertical pattern

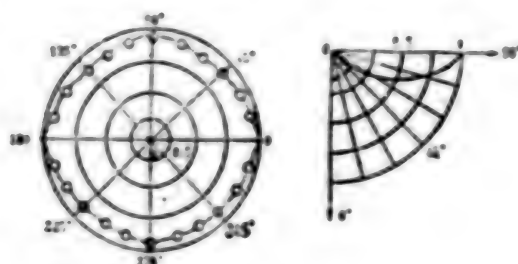


Figure 12

(4) Structural Characteristics

1. Construction of the antenna is simple, it is easy to manufacture, and production cost is low.
2. It is suitable for all-weather operation. An antenna equalizer and a $\lambda/4$ impedance transducer are completely assembled around a $\phi 30$ axial strut.
3. It is easy to erect. The total length (height) of the antenna array is 2.6 m and the weight is 4.5 kg.
4. A lightning arrestor can conveniently be mounted, and it will not affect the antenna field configuration.

(5) Results of Communications Testing

This antenna array stood 25 m high. It was fitted with a model 2JDD-6 transmitter, and communications signals were sent to each substation within a radius of 50 km. The results were good. Not only is it a good performance communications antenna, it is also a rather ideal transmission antenna for a small-scale television broadcasting station.

III. Dimensions of A Transmission Antenna for a "1 - 12" Frequency Channel Broadcasting Station

In order to facilitate application, the table below will now give some dimensions of a transmission antenna for a "1 - 12" frequency channel broadcasting station:

unit: mm

parameters	frequency channel											
	1	2	3	4	5	6	7	8	9	10	11	12
L_{source}	2684	2330	2058	1762	1600	822	789	752	724	685	667	641
$L_{\text{reflected}}$	2974	2584	2280	1953	1776	912	875	833	802	770	749	714
$D(L_{\text{reflected}} - L_{\text{source}})$	2740	2350	2102	1800	1606	840	806	768	740	710	680	657

Because the television frequency bandwidth is 8 MHz, L_{source} represents the dimensions of the converted oscillations.

9926

CSO: 5500/4194

PHILIPPINES

CRONY-OWNED DOMESTIC SATELLITE OWES \$2.4 MILLION

Quezon City ANG PAHAYAGANG MALAYA 26 English 25 Apr 85 pp 1, 2

[Article by Ben Evardone]

[Text]

A crony company which owed the Indonesian government unpaid bills amounting to \$2.4 million has been allegedly causing international embarrassment to the country, an opposition member of parliament revealed at the Batasan.

During Tuesday's Question Hour, MP Orlando Mercado (Opposition-Quezon City) alleged that the Domestic Satellite (Domsat) company owned by Ambassador Roberto S. Benedicto, a crony of Pres-

ident Marcos, has not settled its obligations for the past three years to the Palapa communications facilities owned by the Indonesian government which provides satellite services to several Southeast Asian nations, including the Philippines.

"This is an international embarrassment on our part," Mercado said. Mercado also assailed the Bureau of National

and Foreign Information (BNFI) and the Philippine News Agency (PNA), news agencies of the government and subscribers of Domsat, which could not pay their obligations when they have regular budgets.

Information Minister Gregorio Cendana said he has already acted on the matter, and said that "we are capable of paying but for sometime."

Mercado also quoted Cesar Hechanova, Domsat's senior vice-president, as saying Domsat will pay its obligations "as soon as we have money."

The Philippines relies on Palapa for its long distance telephone calls and to beam television programs nationwide, Mercado said.

He also cited a report of the Asian Wall Street Journal, that President Marcos has authorized Domsat to have the exclusive franchise for domestic satellite transmission in the country and exempted the company from paying taxes.

Also during the Question Hour, Mercado assailed media monopoly of presidential cronies like Benedicto.

SOUTH KOREA

BRIEFS

DIGITAL EXCHANGES FROM ERICSSON--Ericsson has received an order worth a little over 300 million kronor from the South Korean telecommunications agency, reports TIDNINGARNAS TELEGRAMBYRA. The order involves AXE digital telephone exchanges. This is Ericsson's second large order from South Korea, and it is part of a framework agreement between Ericsson and the South Korean telecommunications agency. The order covers equipment and components which are to be delivered from Sweden for local assembly. [Text] [Stockholm DAGENS NYHETER in Swedish 29 May 85 p 10]

CSO: 5500/2650

VIETNAM

BRIEFS

COMMUNICATIONS CABLE NETWORK--The postal and telegraph sector has completed the second stage of the installation of the communications cable network linking Hanoi with the northeastern region. The first stage was completed in June 1984. Thanks to assistance provided by Soviet specialists, the second stage was completed before schedule, thus effectively improving postal and telegraph services between the capital city and northeastern provinces. [Summary] [Hanoi Domestic Service in Vietnamese 0500 GMT 24 May 85 BK]

CSO: 5500/4336

BULGARIA

RADIO MARTI: 'MOST INSOLENT INTERFERENCE'

AU241732 Sofia TRUD in Bulgarian 23 May 85 p 4

[Boris Metodiev article: "Disgraceful Provocation: Jose Marti Will Always Belong to the People of Revolutionary Cuba"]

[Text] The heroic island of freedom is currently seized by an outburst of indignation these days. The Washington administration committed an act of gross provocation against the Cuban people. On the occasion of the 90th anniversary of the heroic death of Jose Marti, the apostle of Cuban freedom, the ardent fighter for social and national liberation, a subversive American radio station began to broadcast from the shores of Florida, cynically named after the immortal son of Cuba and of the American Continent.

The lie about the goal of the broadcasts is as incredible as it is pretentious: "To inform the Cuban people about events happening in Cuba." This is a most insolent interference by the Washington rulers into the sovereign, domestic affairs of a foreign state. The real goal of the effort is to create even greater political tension in the already explosive situation that exists in the area, to divert the peoples' attention from social conflicts, and from the fierce struggle for political and economic liberation, for freedom from the diktat of the all-powerful United States.

The indignation of the Cuban people is even greater and more spontaneous because they are facing an attempt to disgrace the sacred memory of the giant and genius of the Cuban nation, of its great teacher, and apostle of freedom.

Before his death in the combat against the Spanish colonizers Jose Marti left the following legacy to the coming generations: "In fighting for the independence of Cuba, we must prevent the United States from conquering the Antilles, and then, with newly acquired strength, invading the territories of our America. Whatever I have so far accomplished, and whatever I may achieve in the future -- everything is devoted to this goal. It is to prevent the foreign imperialists from conspiring with the Spaniards to use Cuba as a means for the annexation of our America by the cruel, aggressive North that despises us. **They** should be prevented, and we, the Cubans, must prevent it with our own lives."

The thought of the Cuban and American revolutionary that the "peoples of the American Continent will acquire their true freedom and prosperity only if they stay as far away as possible from the United States" is farsighted and significant.

The fearless Cuban revolutionaries are the real, legitimate heirs of Jose Marti. As early as 1947 Fidel Castro, with a group of his comrades, protested against the

desecration of Jose Marti's monument by U.S. sailors. In 1957, on the occasion of the birthday of Jose Marti, the attack on Moncada Barracks took place in the name of his ideals.

The new "crusaders" efforts are doomed to failure. Revolutionary Cuba resisted the merciless, imperialist blockade. It resisted military attacks, threats, and provocations. It resisted the constant and insolent lies of the brutal U.S. propaganda.

Once again, millions of fighters and builders of new Cuba are marching in front of the majestic monument of their great son in Revolutionary Square in Havana, and in front of his monuments throughout the country. For more than a quarter of the century this country has been a fortress of freedom, progress, and socialism in the Western hemisphere, an example and hope for many nations in their struggle against imperialism.

The predatory actions of the fierce enemies of revolution are even more tempering the will of the entire people, who are answering in Jose Marti's words: "The north sea will join with the south sea, a snake will be born out of an eagle's nest before we give up the struggle for our country's freedom and prosperity."

CSO: 5500/3022

GERMAN DEMOCRATIC REPUBLIC

TV SATELLITES, DATA BANKS SCORED AS ECONOMIC WEAPONS

Threatening National Sovereignty

East Berlin HORIZONT in German Vol 18 No 1, Jan 85 (signed to press 29 Dec 84)
p 5

[Article by Dr Willi Paubel and Gerhard Haensel: "New Communications Technology--Use or Abuse?"]

[Text] Hardly any other field of scientific-technical developments has undergone such far-reaching changes in recent years as communications technology and its application. Systems and equipment of telecommunications and mass communications have reached new dimensions, never seen before, through the development of totally new procedures of transmission, storage and restitution. The scientific-technical progress in micro-electronics and the creation of computer systems based on it, as well as actual communications technology, have practically eliminated the former borders between electronic mass media, satellite use and telemetry, and have led to far-reaching consequences in their use. Under the present conditions of the imperialist crusade against socialism and everything progressive, news and information have become a special "raw material of strategic importance" in the world of capital, with whose help technological superiority is to be transformed into political and economic superiority of power. The use of satellites for direct reception of radio and television programs plays a major part in these considerations. As early as 1981, in conjunction with direct satellite transmission of television, the Committee on Government Actions of the U.S. Congress established the goal of the U.S. President being enabled to speak to other nations "direct, live and in color." And in fact, a single satellite, operating at an altitude of 36,000 km, manages to provide radio and television signals to one-third of the earth's surface, while with distribution systems used up to now, thousands of transmitters were needed. Direct transmission of television programs via satellite to millions of television sets in various countries can easily undermine the sovereignty even of technically advanced nations over their own national information system.

Communications satellites play as important a part in the transborder data flow, which feeds with growing intensity the data banks of the data flow of transnational giants such as Lockheed, Exxon, or IBM. Studying the effects of the data flow of transnational monopolies in Brazil, a UN report comes to

the conclusion that it is this international data traffic which thus creates new areas of international tensions: The already existing inequality in international trade relations gets bigger, and the international division of labor deepens further to the detriment of the developing countries, by additionally limiting their competitiveness. Implementation of the national goals of developing countries is made more difficult, since the possession of information has become a question of power. It suffices to point out here that, even according to Western publications, the information potential of the United States consists of, among other things, more than 800 communications satellites and about 90 percent of the facts and figures stored in the data banks of Western countries. These numbers are not at all surprising, for the international data market is organized more monopolistically than any other branch of industry and, according to the estimates of serious media researchers, surpasses everything that the large Western news agencies taken together have ever achieved.

It is natural that the developing countries, and not only they, offer resistance to this communications imperialism based on satellites. Since its 4th summit meeting in Algeria in 1973, the movement of non-aligned states has adopted the important task of overcoming their members' dependence in the field of information and communications. One only has to point to the fact that, according to UNESCO data, these countries with more than 80 percent of the world's population only dispose over 10 percent of the world's media potential. But because of the use of the very latest know-how in this field by transnational media and electronics corporations of the imperialist states for maximizing profits and for maintaining their political, economic and ideological hegemony, new and additional conditions of dependence are being created.

Because of the close interlocking of these corporations with the military-industrial complex of their countries, and their inclusion in armaments production, the necessary enforcement of international norms and principles in the field of information and communications has become a major point on the agenda. According to the demands of the 1984 Information Conference of Non-Aligned States in Djakarta, this increasingly more important area of international relations concerns:

--recognition of the basic principles of international law, particularly the peoples' rights of self-determination, sovereign equality and non-interference in the internal affairs of other states;

--every nation's right to the development of its own independent information system and the protection of its national sovereignty and cultural identity through control of the activities of transnational corporations;

--the right of all peoples to mutually balanced, accurate and comprehensive information, as well as the necessity of working for the reduction of international tensions and permanent peace through the means of information and communications.

the socialist states, together with the developing countries, champion in the United Nations and UNESCO the formation of international information and communications relations which will serve the interests of all nations. This work is closely linked to the struggle for an end to the arms race and for disarmament as the central problems of our time. Naturally, it is of decisive importance to create a climate between nations and peoples which excludes the exploitation of technological advantages in the field of information and communications against others. For this reason, restructuring of international information relations cannot simply be limited to the demand for their decolonialization. For as long as the psychological warfare against the socialist states continues and is even broadened, it will be impossible to stop the imperialist information expansion in the countries of Asia, Africa and Latin America.

Thus there is only one alternative to the technologically highly equipped information imperialism, and that is to create for worldwide communications relations a basis in international law which ensures the development of independent national structures and the equal right of participation of all states in the international exchange of information.

FRG Commentary

Bonn RHEINISCHER MERKUR/CHRIST UND WELT in German 23 Feb 85 p 31

[Article by Reiner Roebbing: "Ideological Barriers Aren't the Only Ones Tottering--Fear of the Free Flow of Information Moves the GDR Leadership to Campaign Against Satellite Television"]

[Text] In view of international information dissemination via satellite and reporting and commentaries across borders, the SED press fears for the ideological barriers it had erected so "laboriously." The technological lag in microelectronics in the GDR makes Pankow loudly voice its demand "to create a basis in international law" for "the development of independent national structures." The semi-official GDR magazine HORIZONT, which "is close" to the Foreign Ministry, calls for a guarantee of "the equal right" of participation of all states in the international exchange of information.

In the first issue of this year, it spoke openly of a "crusade against socialism." In a photo montage, a U.S. satellite was transformed into an "anticommunist" machine pistol threatening socialism from space. Western news are seen in East Berlin as a resource of strategic importance, for which thousands of transmitters are needed to "undermine" the sovereignty of progressive states. There is no doubt about it: for the government of the GDR, the possession of information has become a question of power. The restructuring of international information relations must not be limited to decolonization. In the opinion of the SED, Africa, Asia and Latin America are "threatened" by Western psychological warfare which is constantly increasing. The shortwave propaganda campaign of Radio Moscow and Radio Berlin International is not mentioned, however.

Yet the attack by the East Berlin foreign policy "prestige paper" is not very new. Already in the middle of last year, it criticized the "media monopolies" of the West. A paraboloid antenna for satellite TV carried a "Wall Street Journal" imprint on the concave side. From AP (Associated Press) to NBC and 20th Century-Fox, one tried to unmask the "propaganda apparatus of imperialism."

East Berlin's fear of the "free flow of information" is so great that the scientific journals of the journalism department of the Karl-Marx-University of Leipzig ("Theorie und Praxis des sozialistischen Journalismus 3/84") [Theory and Practice of Socialist Journalism] spoke of an "arrogant and unsuitable" claim by the United States. By virtue of the supreme power stemming from its sovereignty, the GDR state is responsible for its own territory, including matters of information.

At the beginning of the year, the HANDELSBLATT wrote: "When SAT 1 beams over ECS-1, APF is also there. The GDR, normally not squeamish when it comes to abbreviations which are hardly understood in the West, seems to be practically trembling before the expected 'flood' of public, private and corporate television, the 'East-West-beam' of the satellite."

When traveling to the GDR, searching car trunks for Western newspapers may become superfluous in the future--at least, if skillful GDR radio hams start to build copies of Western receiver equipment. Then it no longer matters whether the satellite is received via a paraboloid antenna which was made from Grandma's old "salad bowl." At least one technical hacker in Salzgitter managed to get Soviet television from Moscow on his local TV set via the Soviet satellite "Horizon". He built himself a parabolic mirror with a diameter of 1.20 meters out of "radio scrap."

When the SED recently issued a proclamation on the occasion of the "40th anniversary of the liberation," once again the full regimentation of the GDR press became visible. The "agitation department" of the SED Central Committee prescribed for all newspapers of all parties and mass organizations both placement and layout, including the headline and subtitles, down to the very smallest detail.

9917

CSO: 2300/318

BRAZIL

MILITARY USES OF ELECTRONICS FIRM'S PRODUCTS DISCUSSED

Sao Paulo GAZETA MERCANTIL in Portuguese 20-23 Apr 85 p 12

[Article by Sergio Garschagen]

[Text] Brasilia--Prologo, Inc. (Electronic Products), a subsidiary of IMBEL (Ordnance Industry), is the only state-owned enterprise in the country that specializes in the development of electronic equipment for military use and of communications protective devices for the security sectors and the Armed Forces.

For the first time since it began its activities in March 1981, Prologo is going to participate in an informatics fair, where it will exhibit some of its principal products, particularly its eight-bit PSM 8501 microcomputer, which is designed specifically for use in ballistics.

Prologo's manager of research and development, Jose Luiz da Cunha, has announced that this microcomputer may equip the Astros multiple rocket launcher, which is already being used by the Brazilian Army and exported to various countries.

Cryptology

Also at its 160-square-meter stand at the Brasilia Informatics Fair, which opens this weekend, Prologo is presenting a diversified line of cryptological equipment intended to ensure the secrecy of satellite telephone communications by encrypting the messages.

Exhibited as the foremost of those devices will be Prologo's newest product: the 16-bit Sistex, which is designed exclusively to solve problems related to the security of information in offices.

Before the establishment of Prologo, which occupies an area of 8,000 square meters in Brasilia's industrial zone, the country imported that technology from other countries, "and that provided us with no certainty as to the secrecy of national transmissions by the security forces or the Armed Forces," explains the firm's manager.

Company

Prologo currently has 500 employees, including about 100 electronics engineers, and its net billing last year totaled 14 billion cruzeiros--representing a jump of 502 percent over the year before.

For 1985, Prologo expects its net billing to rise to 70 billion cruzeiros and the number of its employees to reach 600. Because of its activities, the firm has become known in Brasilia as "the SNI [National Intelligence Service] research laboratory."

Manager Jose Luiz da Cunha also recalls that Prologo is going to win new markets for its products by exporting its line of military microcomputers and cryptographic equipment.

Prologo's technicians have developed a type of special fuse with an electronic head for use on antiaircraft projectiles and ballistic missiles. Production will begin in May.

That equipment, which will be installed on the army's 40mm antiaircraft guns, does not require a direct hit to explode and scatter thousands of balls of tungsten capable of knocking down fighter jets. The special electronic fuse "detects" the presence of the target in its vicinity and detonates automatically.

Prologo expects to export a minimum of 20,000 fuzes of this type, which cost \$250 each.

The firm hopes to export \$1 million worth of cryptographic equipment. Prologo's manager declined to say anything about foreign sales of military microcomputers. That line of products is sold directly by IMBEL.

11798

CSO: 5500/2079

BRAZIL

NATIONAL INFORMATICS AND AUTOMATION PLAN DISCUSSED

Incentive Plan

Brasilia CORREIO BRAZILIENSE in Portuguese 11 May 85 p 12

[Article by Gladston Holanda]

[Text] The National Informatics and Automation Plan drawn up by the SEI (Special Secretariat of Informatics) will be discussed by CONIN (National Council on Informatics and Automation) at its meeting next Wednesday. That plan calls for establishing various incentives to ensure that Brazilian firms will continue to grow and also be in a position to face competition 8 years from now when their protected market disappears.

CORREIO BRAZILIENSE reported the general outlines of the plan this week, and today we are publishing an exclusive report on the most important points in the document, which has already been delivered to the 16 ministers and the 7 professional associations represented on CONIN. In Rio de Janeiro today, SUCEU (Society of Computer and Auxiliary Equipment Users) will decide which three names to include on the list to be submitted to the minister of science and technology, Renato Archer, so that the president of the republic can choose a representative of that organization in time to participate in the meeting on Wednesday by CONIN.

The SEI's experts listed six types of incentive that might be granted. One is the incentive for company capitalization (of an institutional nature, it will provide funds for domestic firms at a quite moderate cost), and another involves tax incentives applying to capital goods (these combine a reduction in or even exemption from the rates applying to the tax on imports, the tax on industrialized products, and the tax on credit, exchange, and insurance transactions in cases involving projects for research, development, and production in connection with data processing goods and services).

There are also tax incentives applying to production goods and the goods produced (a reduction in or even exemption from the rates applying to the tax on imports, the tax on industrialized products, and the tax on credit, exchange, and insurance transactions for the acquisition of industrial goods); tax incentives for research and development programs concerned with goods and services or the recruitment of human resources; special incentives for domestic micro-electronics firms that carry out physical-chemical processing for manufacture;

and special incentives for domestic software firms (reducing taxable profit by the same percentage as the percentage of the company total represented by gross revenue from the product).

The section covering incentives for the informatics sector is the most important part of the first volume of the National Informatics Plan, which also outlines the industry's history, present situation, and prospects. The second volume divides the industry into 15 segments, presenting a detailed analysis of each and the goals to be achieved by each. After analysis and approval by CONIN, the plan will be submitted to the National Congress as required by the Law on Informatics that was passed by the legislators. Tomorrow we will present the most important items in the second volume.

Goal Is Technological Autonomy

Brasília CORREIO BRAZILIENSE in Portuguese 12 May 85 p 18

[Article by Gladston Holanda]

[Text] The National Informatics and Automation Plan drawn up by experts at the SEI will be discussed by CONIN at its meeting next Wednesday. The priority goal is real technological autonomy for the industry. For that goal to be achieved, special attention will have to be paid to microelectronics. This will include incentives for domestic engineering projects for the electronic equipment manufactured in Brazil and other measures enabling that industry, which now has virtually only one project to its credit--a project developed by the SID firm in Minas Gerais--to gain momentum and firmly establish itself for good.

Microcomputer firms will be the objects of close supervision aimed at preventing the simple reproduction of imported equipment with no concern for independent development. Big computers are also targeted in the plan, the second volume of which (CORREIO BRAZILIENSE reported on the first volume, dealing with incentives for the industry, yesterday) calls for the solid establishment of at least one domestic firm for the manufacture of big computers.

The computerization of society was not neglected by the experts who drew up the plan. According to them, a wide-ranging and thorough discussion must be started without delay. It must involve all segments of Brazilian society in the issue of which paths are to be followed in our process of computerization. It is particularly essential to resolve issues related to employment and the use to be made of the gains in productivity resulting from the process of our economy's modernization.

The second volume of the plan is divided into 15 sections corresponding to the various fields covered by the informatics sector. It discusses their characteristics, present situation, and prospects and the short-, medium-, and long-term objectives and goals to be pursued. Here are the most important goals that will be pursued in each field.

Microelectronics

The goals in microelectronics are to implement the microelectronics program for university laboratories as a means of achieving the objectives chosen with respect to human resources and research and development; to provide the Informatics Technology Center (CTI) with the indispensable infrastructure for carrying out projects related to integrated circuits, the manufacture of masks, and the dissemination of components; to organize the industrial, sectoral, and regional policies in a manner consistent with the national microelectronics policy; and to foster industrial activities for the production of inputs and intermediate electronic goods, having in view not only the domestic but also the international market.

The plan also calls for stimulating domestic engineering projects for the electronic equipment produced in this country, fostering the local production of capital goods used in microelectronics, and promoting industrial activities for the design and manufacture of integrated circuits and semiconductor and optoelectronic components.

General Use

The general data processing field comprises activities related to research and development, industrialization, and technical support for users. This covers both hardware in general and its peripheral equipment and other devices needed to constitute a complete system for the processing of operational and management information.

The following are short-term goals in this sector: consolidation of the activities of the CTI's Computing Institute with a view to improving the link between the firms and the science and technology centers; consolidation of the means for accommodating national industry's demand for microcomputers through better cost-performance ratios, especially in the area of peripheral equipment; and, most important, consolidation in the technological area of the complete separation of the sector of microcomputers and their peripheral equipment from foreign ties. For the medium term, the experts who prepared the document say we should achieve a score of 1.2 million installed systems, chiefly in the field of microcomputers, by making it possible to use dedicated components and basic software developed in Brazil.

Software

Today, as the document points out, the national market is characterized by the predominance of foreign software and dependence on it. To change that situation, the document lists several goals, among them the following: the establishment of mechanisms to control the importation and placement of software and of regulations governing domestic marketing; the establishment of lines of credit and financing for projects to develop and market software compatible with the realities of national industry; the establishment of a task force to determine rules and procedures for the approval, certification, and classification of software; and the promotion of contracts between the federal public sector and domestic firms for the supplying of software and services.

Medium-term goals for this sector are as follows: to ensure that national software represents at least 60 percent of the billing in the market for Brazilian-made equipment; to ensure that exports of national software represent 10 percent of the total billing by domestic firms to the domestic market; and to provide legal regulations governing software.

Remote Processing

One objective of the plan is to provide the country with a data communication structure suitable for computerizing the country and available to every Brazilian citizen. Short-term goals in this connection include the following, among others: consolidation of the national industry for communication (front-end) processors compatible with national data equipment and with software architecture by providing support for standardized Brazilian protocols based on the OSI/ISO model.

Technological mastery of digital signal processing by national firms is also to be fostered by placing high-speed modems on the market and significantly increasing participation by national industry--in the form of products based on the Tropic technology--in the public market for telephone switching. There is also the intention to establish in Brazil a national industry for private digital switching equipment of the PABX type.

Medium-term plans call for consolidating the national market and industry for integrated office automation terminals, while the long-term goal is to achieve technological autonomy and complete mastery as regards remote processing in areas regarded as strategic.

Military Informatics

In the field of military informatics, the objective is to keep track of and support--within the SEI's sphere of authority--efforts by national firms concerned with equipment for military use to achieve technological and entrepreneurial qualification. Another objective is to intensify the exchange of ideas and experiences in the field of informatics that are of interest to the Armed Forces and the strategic and national security areas.

The goals in this area are few in comparison with those in other sectors. For the short term, the plan calls only for holding a seminar on informatics for the benefit of the Armed Forces and the Military Police. In the medium term, the OSI/ISO model and standard OSI protocols should be adopted for the architecture of military computer networks for military tactical applications.

Industrial Automation

Strangely, there is no point at which the National Informatics Plan discusses the implications of industrial automation in all subsectors as regards the stagnation in job opportunities or the unemployment to which its introduction may give rise. The subject is dealt with in a technical manner, with no concern for its social aspects. Concerning the area of process control, the plan includes the short-term goal of regulating the conditions for including that

sector's equipment, systems, and services in packages with foreign financing; equipping national firms to develop applied software; and developing a national research and development program for the sector.

As far as automated manufacturing is concerned, the plan calls for consolidating the coordinated administration of government action in that area and consolidating the projects for the development, manufacture, integration, and marketing of robotics systems--currently under analysis by the SEI.

International Exchange

In the field of international cooperation, the plan considers it probable that Brazil and China will undertake a degree of joint technological development in their mutual interest. Although it does not say so, this probably refers to the production of chips. A number of cooperation efforts with Latin America and Africa are also anticipated.

Concerning joint development in industrialized countries, the plan says that prospects exist in those fields where firms in the industrialized countries will need equipment for their Brazilian subsidiaries. The development by foreign firms already located in Brazil and by national firms of specific technologies previously developed in laboratories at the home offices is one of the major objectives that the plan wants to see achieved.

The plan says that the general trend in the industrialized countries seems to be leading to a revival of protectionism and retaliatory measures in the areas of trade, investment, and finance: "The United States, the EEC, and Japan will make every possible effort to ensure that 'services' and 'high technology' are included in the framework of GATT."

Included among the goals for international exchange are permanent participation and negotiation in international, bilateral or multilateral, political, and commercial forums to guarantee a position of real respect, credibility, and stability for the national informatics policy.

Public Sector

As a medium-term goal in this specific area, the plan calls for working up projects for OSI/ISO architecture for government information systems, including the setting of standards for interlinking computers in the field of public administration and the development of a computerization program for Brazilian municipalities in cooperation with government organizations in that field and with private national firms.

Applications

In their proposal to CONIN with respect to economic-social applications, the SEI's experts have in view the establishment of a program for computerizing Brazilian society and the dissemination of the results of projects already implemented experimentally.

11798

CSO: 5500/2079

BRAZIL

MINISTERS SAY FOREIGN INVESTMENTS WELCOME

PY060141 Rio de Janeiro LATIN AMERICAN DAILY POST in English 5 Jun 85 p 1

[Special to the DAILY POST by Edwin Taylor]

[Text] Rio de Janeiro--Two top government ministers Tuesday told foreign businessmen that their presence is definitely welcome in Brazil.

The message came from Industry and Commerce Minister Roberto Gusmao and Planning Minister Joao Sayad during the concluding sessions of a 2-day seminar on the Brazilian economy for foreign Brazilian businessmen, sponsored by the Geneva-based EMF Foundation.

In explaining the government's concept of an industrial policy for Brazil, Gusmao stressed that the country needs "a constant flow of new technology and foreign capital."

Gusmao said the New Republic is developing an industrial policy that reduces the roll of government in the economy and rewards those areas of the private sector with the greatest and quickest growth potential.

"We are trying to protect private enterprise without using protectionism," said Gusmao, referring to the use of fiscal incentives for high-growth sectors.

For this, he said, the country needs resources. "If internal resources are enough, they will solve this problem. But we know there are not investments available for all the sectors. There are few other sources of investment, either the government provides them or we have to open up to foreign capital. Obviously, we have to open up."

According to Gusmao, the only question is in what form to receive foreign capital, as independent risk capital or in association with Brazilian firms. This, he said, is a matter for Congress to decide.

"From the government point of view, we feel you cannot develop a country with as much potential as Brazil but lacking in resources unless you have foreign investment. These investments will always be welcome in the new policy of Brazil."

Market Reserve

When questioned on the market reserve policy in the computer area and the possibility other reserves may be created, Gusmao told the foreign businessmen that the government's informatics policy was designed to preserve the domestic market and permit the growth of Brazilian technology.

While admitting that a market reserve "sometimes preserves certain interests that are not in the real interests of the country," Gusmao refused to criticize the existing restrictions on foreign computer firms, saying the law is already in effect and foreign businessmen must learn to live with it.

He said, however, he does not believe the restrictions will be expanded, calling such a move "irrational."

Gusmao promised his listeners that the economic policies of the New Republic will not be hidden from view.

"What we wish to underline is that national policy will be transparent. There will be no disagreeable surprises," he said.

According to Gusmao, the goal of the government is to assist Brazilian industry reach the point where it can compete with the industries of the developed nations. "Brazil can reach this stage and it will," he stated.

In general, Gusmao gave the businessmen an upbeat view of Brazil, saying that "the economy is growing, industry is growing. We have an exceptional soy crop and the coffee crop is also good. We are growing. Brazil has to believe in its own dynamism."

Sayad, after his closed session with the foreign roundtable participants, merely told reporters "foreign capital is very welcome in Brazil." He did not elaborate.

After Sayad finished his remarks, the forum broke up into five private discussion groups with the foreign businessmen closeted with Brazilian sectorial specialists.

This is the first year the EMF Foundation has held a roundtable on Brazilian concerns. More than 100 foreigners and another 50 Brazilians attended the event, which began on Monday with an address by Finance Minister Francisco Dornelles, who also expressed the opinion that foreign capital was welcome in Brazil.

CSO: 3300/35

BRAZIL

BRIEFS

BRASILSAT I OPERATIONAL--Communications Minister Antonio Carlos Magalhaes today in (Taubate) announced that Brazil's satellite Brasilsat I has started to operate. [Begin Magalhaes recording] The Brasilsat I is already in position and today, 31 May, we are completing its [words indistinct]. [end recording] The communications minister also revealed that Brasilsat II will be operational by December. [Text] [Brasilia Domestic Service in Portuguese 2200 GMT 31 May 85]

CSO: 5500/2083

COLOMBIA

LIBERAL INSTITUTE SAYS SATELLITE ORBIT VIOLATES 1979 CODE

Bogota EL TIEMPO in Spanish 13 May 85 p D-9

[Text] The Institute of Liberal Studies (IEL) has pointed out that the location of the Galaxy II, a North American satellite, in the Colombian segment in its geostationary orbit, without taking into account the objections expressed by our country, constitutes a clear violation of the 1979 radio communications agreement.

At the same time it urged the need to define, without any further delay, a system of standards which would take into account our rights in the area of the Equator and which would clearly define the rules to be observed. This would provide our country with a solid, juridical position in the international community.

The international policy group of the IEL, made up of Dubin Sanchez, Rodrigo Pardo, Alfredo Rey, and Boris Plazas, declared that in addition to the juridical violations it has committed, "the attitude of contempt for international agreements, displayed by the United States, reflects a desire to keep clear control in the communications field and to maintain a balance of forces in its favor, in the face of the demands of Third World countries. These countries are determined to defend their national sovereignty over their natural resources and equitable access to them, in accordance with the needs and technical capacities of each country."

The presence of the Galaxy II satellite in the Colombian segment of its geostationary orbit, was reported and denounced recently and led to the presentation of an energetic protest by the Colombian Ministry of Foreign Affairs to the United States Government.

According to the regulations of the International Telecommunications Union (ITU), in case technical reasons arise leading to interference between the communications of two countries, due to the location of a satellite in orbit, the countries concerned must resolve the dispute through the coordination of frequencies. The North American satellite will interfere with the position registered by Colombia for SATCOL [Colombian Satellite]. However, despite our government's request for the coordination of frequencies, this procedure has not been followed.

The IEL compared the defense of national sovereignty over segments of geostationary orbit to the struggle carried on by the developing countries for the oceans and respect for its resources, in the face of the expansionist policies of the industrialized world.

In the same way the IEL asked that the ITU radio communications agreement, signed in Nairobi on 6 November 1982, should be ratified, because such action would provide the necessary arguments for the claims of the Colombian Government to be heard and to be successful.

5170

CSO: 5500/2078

1 July 1985

BANGLADESH

MINISTER OPENS NEW AUTOMATIC TELEPHONE EXCHANGE

Dhaka THE NEW NATION in English 16 May 85 p 8

[Text]

LALMONIRHAT, May 15 (BSS) : Minister for Land Administration and Land Reforms Dr T I M Fazlay Rabbi Chowdhury inaugurated 400 lines modern automatic telephone exchange at the New Lalmonirhat district yesterday.

Addressing a meeting on the occasion of inauguration, the Minister said that government had undertaken a comprehensive programme of bringing all the regions of the country under modern tele-communications network within shortest possible time with a view to providing the benefits of tele-communication to all. In this context the Minister stated that under the nation-wide dialling (NWD) system, 25 important towns of the country had been covered and the process will continue. He added that Bangladesh had also become the member of world tele-communication network through introducing international subscribers dialling system.

Dr Rabbi further said that a scheme had also been taken up to introduce digital switching and digital transmission to provide higher tele-communication facilities to the people. Under this system, the Minister said, not only the quantum of telephone defects could be minimised but also it would help identify and remove the defects of telephone.

The Minister urged the T and T officials to work with dedication to better the tele-communication system in future. He also thanked those who have extended cooperation and support in setting up the exchange.

The Chairman of T and T Board, Kazi Mohd. Rouf and the General Manager, T and T Board, Rajshahi Division also spoke on the occasion.

The Minister went round different sections of the exchange and got apprised of the machineries and other equipments of the exchange. Most of the telephone materials used in the exchange are produced in Bangladesh Telephone Industry at Tongi.

CSO: 5550/97

INDIA

COMMUNICATIONS MINISTER TELLS PLANS FOR NETWORK

Calcutta THE STATESMAN in English 27 Apr 85 p 15

[Text]

NEW DELHI, April 26.—Communications Minister, Mr R. N. Mirdha, today said an ambitious programme has been drawn to double the country's telecommunication network by the end of the Seventh Plan, reports UNI. This will be done by inducting sophisticated equipment.

Inaugurating a seminar on telecommunication transmission here, Mr Mirdha said the total quantity of equipment required for switching and transmission was far larger than that available through indigenous production.

Technology available to Indian manufacturers was of the analog type, but the growth of the network envisaged use of digital technology, he added.

The Minister said sophisticated switching equipment could be manufactured at Mankapur in the Gonda district of Uttar Pradesh under the programme.

Mr Mirdha said the Seventh Plan proposals included special components to achieve a balance between long distance telecommunications and the growth of local switching capacities. There was a proposal to expand the 18,000 km route network of coaxial-cable in the country by another 6000 km in 1985-90.

He said the satellite network could be considerably expanded with the induction of digital channels.

He said the demand for providing modern non-voice services in the country had been rising rapidly and in this connexion his Minister

proposed to introduce an exclusive data network based on packet switched technology during the Seventh Plan.

CSO: 5550/0108

INDIA

ALCATEL DIRECTOR DISCUSSES INDIAN OPERATIONS

Bombay THE TIMES OF INDIA in English 25 Apr 85 p 17

[Text] New Delhi, April 24: An Indian subsidiary, with majority Indian partnership, is being formed by CIT-Alcatel of France to facilitate greater participation in the modernisation of telecom services and to extend cooperation to other areas, including India's space programme and satellite communications.

CIT-Alcatel, under a package agreement, is putting up the first electronic switching system factory at Manakpur and recently installed the first E-10 system exchange at Worli in Bombay. Besides, the agreement provides for the supply of equipment to 22 other similar exchanges and 16 transit exchanges as well as expansion of the Palghat factory of ITI manufacturing private automatic exchanges.

Mr. Christian Fayard, director-general of the parent factory, told a news conference the proposed service-oriented Alcatel (India) could be a channel for transfer of high technologies developed by the parent company.

Asked why the Worli factory was behind schedule by six months, he said it was the first one being put up and there were constraints. But he was certain that the E-10 system was the basis for communications networks of the future.

He was hopeful of securing collaboration on the second switching system factory but said a decision was yet to be taken by the government.

Mr. Fayard said in reply to a query that under the existing agreement Alcatel would collaborate with the telecommunications research centre on research in E-10 system. He claimed that ten million lines in the world were covered by the system.

According to him, co-operation with India was not a buyer-seller relationship but envisaged full transfer of technology. As one of the largest world suppliers of microwave transmission system, submarine cable transmission and space and ground segments of satellite communications, he thought that Alcatel could extend co-operation to other fields.

Stating that there would be maximum indigenisation of components in its ventures, Mr. Fayard noted that it would open up prospects for exports for the Indian components industry.

Furthermore, "Keeping in mind the recent policies announced by the government concerning electronics, Alcatel (India) will look for adequate partners and co-operation for its new products. This can be in the form of simple licensing agreements or joint ventures."

CSO: 5550/0099

INDIA

TELECOM IMPROVEMENTS PLANNED FOR SOUTH DESCRIBED

Madras THE HINDU in English 18 May 85 p 12

[Text]

MADRAS, May 17.

As part of its programme to create a sound infrastructure for telecom development, the Central Government has embarked on electronic switching. In the coming years, containerised electronic exchanges and electronic trunk automatic exchanges of digital type will be opened. The first containerised electronic exchange type in the Southern Telecom Project Circle was commissioned in Kurnool, Andhra Pradesh in March last, according to Mr. A. V. S. Mari, General Manager of the Project Circle. He was speaking at a function organised to celebrate the 17th World Telecommunication Day here today.

Mr. Mari said the electronic exchange would be housed in two adjacent containers on plinth beams and inter-connected by a passage and a ventilation shaft. The containers could accommodate 4,000 lines with one pair of processors capable of handling about 38,000 calls in the busy hour. The exchange provided the latest technology with new facilities like abbreviated dialling and alternate routing. Environmental requirements were not stringent, and the exchange could provide reliable and better service.

In the Southern Region, five exchanges had been planned, the first being the 2,000-line Kurnool exchange already set up. Other exchanges due for commissioning in the current year were: Karur (T. Nadu) (3,000 lines), Gulbarga (Karnataka) (2,000 lines), Changanacherry (Kerala) (2,000 lines) and Udipi (Karnataka) (2,000 lines).

He said one Public Call Office (PCO) for every 5 km in the rural areas would be provided. In addition, Multi Access Rural Radio Sche-

mes (MARPS) for stable transmission links on a wireless basis to a number of villages around a base station already would be established. One such link with Nanguneri (T. Nadu) as the base station connected to 12 Long Distance Public Call Offices (LDPCO) at a cost of Rs. 15 lakhs, had started functioning.

New exchange for Kumbakonam: A new exchange with a capacity of 2,500 lines at Kumbakonam, Tamil Nadu, would be taken up during 1985-86. Digital Electronic Trunk Automatic Exchanges would be established at Tiruchi (2,000 lines) and Gummudipundi (T. Nadu) (400 lines).

The wide band microwave scheme for a distance of 718 km at a cost of Rs. 278 lakhs was already under way to connect Madras and Kodakanal through TV Relay Link for the benefit of viewers in Madurai and adjoining districts. Simultaneously, the Coimbatore-Pollachi link would be expanded.

Steps were being taken to expand the narrow band microwave link covering a distance of 2,099 km at a cost of Rs. 1,954 lakhs. This would provide STD facilities in eight towns in Andhra Pradesh, seven towns in Karnataka, and two towns (Srivilliputhur and Palani) in Tamil Nadu, Mr. Mari said.

STD facility: The Ultra High Frequency Microwave Link for a distance of 1,906 km at a cost of Rs. 1,685 lakhs would provide STD facilities in Tamil Nadu to the following towns: Paramakudi, Ramanathapuram, Dharapuram, Mettur Dam, Kayalpattinam, Melur, Thiruvannur, Thiruthurai, Thirukottur, Aranthangi and Cumbum. This microwave link would also provide STD facilities to several more towns in Andhra Pradesh, Karnataka and Kerala.

CSO: 5550/0104

1 July 1985

INDIA

RAJYA SABHA DISCUSSES BROADCASTING, MEDIA POLICY

Madras THE HINDU in English 9 May 85 p 6

[Text]

NEW DELHI, May 8

Mr. V. N. Gadgil, Information and Broadcasting Minister, today rejected the Opposition criticism against All India Radio and television as "politically motivated" and said their performance was not not in any way less than the British Broadcasting Corporation. He also ruled out conversion of AIR and TV into autonomous bodies.

Replying to a two-day discussion in the Rajya Sabha on the working of his Ministry, he dismissed the criticism that the government media gave too much prominence to the Prime Minister and other Cabinet ministers, and less to the Opposition leaders.

The Minister cited details of the coverage during the last Lok Sabha elections and said the time given to the Opposition was almost double that given to the Ministers.

Press freedom: Referring to the freedom of the press, Mr. Gadgil said that while it did not favour a "conformist press", the Government did not want a "confrontist press" either. "What the Government wants is a free, healthy and unsubsidised press."

"I am trying to build mutual cooperation between the press and the government," through discussions with many of the editors and journalist friends, he said.

Mr. Gadgil warned that those in the press who violated communal harmony, and who doubted the integrity and unity of the nation would not receive help from the Government.

Newspaper policy to be reviewed: The newspaper and advertisement policies would be reviewed to ensure a fair deal to medium and small newspapers.

Mr. Gadgil termed the newspaper policy as a complex one, and said he was reconsidering it. He had come to know of a case where a newspaper allottee disposed of his quota in the black and made a clean Rs 1 lakh. "There are some options before me for plugging the loophole, but I will not disclose them now."

He was also reviewing the advertisement policy. He had certain alternatives on this subject too, but he would not divulge them now.

The Minister assured members that suggestions to solve the problems of the Hindi news agencies Hindustan Samachar and Samachar Bharati would be determined carefully to safeguard the interests of the employees.

The Minister said he was personally not in favour of the Government starting a Hindi news agency because it would be "misconstrued" as interference in press freedom. But the Hindi newspapers could

come together and start an agency as had been done by English papers in the case of PTI.

He was "misunderstood" on the Government stance on the question of the two sick Hindi news agencies. The Government had helped them to the extent of Rs. 2 crores. These agencies were in huge arrears of teleprinter rentals.

Efforts would be made in conjunction with other Ministries to evolve a national communication policy covering all media to "take the country into the information society."

Earlier, participating in the discussion, Mr. Pyarelal Khadwalal (BJP), alleged that AIR and Doordarshan were adopting a partial attitude and were used by the ruling party for political ends.

Mr. Chaturanan Mishra (CPM) said Radio and Doordarshan had failed in promoting national integration and had lost their credibility with the people. Both the members said AIR and TV should be made autonomous bodies.

Mr. S. P. Malaviya (Lok Dal) was critical of the over-five hour direct telecast of the Congress centenary celebrations. But Mr. Pawan Kumar Ansal (Cong-I) justified the direct telecast, maintaining that the event was of not only national but international importance. The history of Congress was synonymous with the freedom struggle.

Mr. Ansal said AIR was continuing with its assigned role and people looked to it for authentic information.

Mr. H. L. Kapoor (Him) called for improving the pay and working conditions of Doordarshan staff, a number of whom worked for outside agencies producing sponsored programmes. He alleged that there was corruption in the commercial section of Doordarshan and money was passed to buy time for sponsored programmes.

The Government was criticised also for "adopting an indifferent attitude towards problems faced by the Hindi news agencies, Hindustan Samachar and Samachar Bharati."

Mr. Khadwalal alleged that the Government was keeping quiet about the two agencies owing to "political vendetta" and wanted it to make its position clear. The employees were virtually on the roads.

Mr. Vishwa Bandhu Gupta (Cong-I) said a policy should be framed to make Hindi news agencies viable and on a par with English news agencies.

The flow of newspaper should be streamlined and made available to all newspapers, he said and sought greater cooperation between the Registrar of Newspapers and the State Trading Corporation in making the allocations.

Mr. Gupta said small newspapers were being denied the fair amount of advertisements by the Directorate of Audio-Visual Publicity.

Prof. C. Lalithamma (Telugu Desam) complained that bulk of advertisements was taken away by bigger newspapers and called for a tilt in favour of medium and small dailies. Some of the newspapers indulged in malpractices and some did not present a correct picture of what was happening in the country. Registration should be cancelled for those newspapers which violated well laid down policies. He also supported the demand by journalists for a new wage board.

Mr. Malaviya expressed concern over the attacks on journalists and newspaper offices in Gujarat. He pleaded that the rights of journalists be protected.

—PTI & UPI.

CSO: 5550/0103

INDIA

BRIEFS

OPTICAL FIBER PLANS--New Delhi, April 27: The manufacture of optical fibre, the airthin multi-channel replacement of the conventional cable, will begin in the country next year. Global bids have been invited for full technology and related equipment required for the vast transmission system in the late eighties and the nineties. [Text] [Bombay THE TIMES OF INDIA in English 28 Apr 85 p 7]

COMPUTER CENTER PLANS--Hyderabad, April 28 (UNI): A Rs 20-crore mainframe computer centre, the first of its kind in the country, would be set up here soon, the electronics commission chairman, Mr M. S. Sanjeevi Rao, said today. Presiding over the foundation stone laying ceremony for the main building of the Institution of Electronics and Telecommunication Engineers (IETE) here, he said the Electronics Corporation of India (ECIL) would manufacture the mainframe computers which were now being imported. He said they would be manufactured in collaboration with either French or American firms. Speaking on the occasion, the Andhra Pradesh chief minister, Mr N. T. Rama Rao, accepted Mr Sanjeevi Rao's request for 150 acres of land. The commission chairman also announced that four regional computer centres under the national informative centre would be opened at Hyderabad, Pune, Bhubaneswar and Delhi at a cost of Rs 10 crores each. [Text] [Calcutta THE TELEGRAPH in English 29 Apr 85 p 5]

ADVANCED TELECOM SYSTEM--New Delhi, May 7: An offer to supply the "most advanced and sophisticated system for future network applications" has been made to the Indian telecom authorities. The offer envisages full-scale technology transfer for manufacturing both switching and transmission systems in India. The first of these was commissioned at Sirsa in Haryana and the 24 others would be put into operation before September. These are computer controlled and can handle 500 to 5,000 subscribers and can be smoothly incorporated in the digital telephone networks, on which the telecom system will be based. The E-10 switching system under French collaboration is being manufactured at Gonda. AT and T Philips officials told a press conference, they had been encouraged to make the offer of full transfer of technology and R and D cooperation by the plans for modernisation of the telecom network and the government's policy on electronics. The offer includes 5 ESS-PRX a digital switching system and a range of fibre optics systems, with which "telephone administration can confidently enter the 21st century." Recently the ministry of communications placed an order for digital transmission equipment for a total length of 550 km for northern and western India. [Text] [Bombay THE TIMES OF INDIA in English 8 May 85 p 12]

ACCORD WITH FRANCE--Bangalore, May 22. The Indian Space Research Organisation and the French space agency, CNES, have signed an agreement to take further steps that would enable India to receive data from the French remote sensing satellite, SPOT, to be launched by yearend. The agreement signed at the eighth Joint Commission meeting of the two organisations held in Paris on Monday and Tuesday, will thus enable the National Remote Sensing Agency to augment its facilities at Hyderabad for receiving data from SPOT. The Indo-French cooperation in space research dates back to 1963, and the receipt of SPOT data is considered valuable for remote sensing applications and for the establishment of a national natural resources management system (NNRMS). The two delegations, led by the ISRO Chairman, Prof. U. R. Rao and the CNES President, Prof. Jacques Louis Lions, also agreed to strengthen their cooperation further with an orientation towards mutual utilization of technical elements and facilities. In this context, they identified telemetry, tracking and command facilities, satellite meteorological research, and active microwave remote sensing as among the fields where future cooperation was possible. [Text] [Madras THE HINDU in English 23 May 85 p 7]

INSAT CIRCUIT USE--New Delhi, May 21. The schedule for the full utilisation of INSAT-IB telecommunication circuits has been advanced to this December, it has been officially announced. Since the satellite became operational in October 1983, a total of 2033 circuits have been utilised. The remaining 1923 circuits would be used by the year end--more than six months in advance. All the 3956 telecommunication circuits of INSAT-IB were originally planned to be utilised in a phased manner in about three years period. The utilisation of circuits in the initial few months is likely to be somewhat slow as installation of additional equipment is involved. However, it will catch up to be completed by December. Twentyeight fixed earth stations--five main, eight primary and 15 small, have been set up so far for the utilisation of INSAT-IB. All the five main stations in Delhi, Bombay, Calcutta, Madras and Shillong, have been provided vided communicat-on through the satellite network amongst themselves. The eight primary stations have communication to distant main stations to provide direct links between main and primary stations over long distances. The small stations are capable of having direct links with any of the five main earth stations, based on the traffic justification. [Text] [Madras THE HINDU in English 22 May 85 p 16]

PLANS FOR RADIO--Pune, May 23: The government will soon augment the power of television and radio transmitters in the border areas and tribal belts, according to the information and broadcasting minister, Mr. V. N. Gadgil. He told newsmen here yesterday that this was being done in view of the fact that our neighbours like China, Bangladesh and Sri Lanka had more powerful transmitters than those in India. A special scheme for the purpose was prepared in the sixth plan period to cover the north-eastern region for which funds would be provided soon, he said. Mr Gadgil said under this ministry's expansion programme, 95 per cent of the country's population would be covered by radio and 85 per cent by T.V. for which a provision of Rs. 2,800 crores would be made. He said the INSAT-IB would become operational by June 1986. The ministry for space and communication had been asked to provide more transponders to increase the range of the existing T.V. stations. This would help interstate transmission of regional programmes, he said. Mr. Gadgil said various

surveys had revealed that the quality of T.V. programmes had vastly improved in the last few years. He, however, felt that more weightage should be given to educational and children programmes. To start with, Walt Disney films would be dubbed in regional languages and telecast. UNI adds: Mr. V. N. Gadgil disagreed with Maharashtra chief minister, Mr. Vasantrao Patil's reported statement that the "time has come to decide if a single person should hold the posts of the Prime Minister and Congress president. [Text] [Bombay THE TIMES OF INDIA in English 24 May 85 p 9]

CSO: 5550/0107

OMAN

BRIEFS

RURAL TELEPHONE NET FROM ERICSSON--Ericsson after overcoming tough competition has received an order from Oman worth between 450 and 500 million kronor. Within 1 year, Ericsson will deliver a new rural telephone network outside Muscat, the capital. Oman's first telephone net was sold by Ericsson. The next large contract was won by Siemens of West Germany. After that, Ericsson succeeded in selling a mobile phone system to Oman for a value of 300 million kronor. "It is very encouraging that Ericsson has been able to return to Oman, and it is very encouraging that Ericsson was able to win out over Siemens," said Ericsson marketing director Magnus Lemmel to TIDININARNAS TELEGRAMBYRA. [Text] [Stockholm DAGENS NYHETER in Swedish 28 May 85 p 10]

DIGITAL PHONE EXCHANGES FROM ERICSSON--Ericsson has taken home still another large order for its AXE phone exchanges and telecommunications equipment. It is the telecommunications agency of Oman which is purchasing the equipment, which is valued at 450 million kronor. Ericsson received its first order just as Oman was starting operation of its mobile telephone system in May last year. [Text] [Stockholm DAGENS NYHETER in Swedish 31 May p 10]

CSO: 5500/2649

PAKISTAN

BRIEFS

SATELLITE LINK WITH TURKEY--Direct telex and telegraph links between Pakistan and Turkey via satellite have been established, thereby facilitaitng telex and telegram services between the two countries. [Text] [Karachi Domestic Service in Urdu 1500 GMT 3 Jun 85 BK]

CSO: 5500/4737

INTER-AFRICAN AFFAIRS

PANA DIRECTOR GENERAL ADDRESSES IGC SESSION

AB292229 Dakar PANA in French 1045 GMT 29 May 85

[Text] Dakar, 28 May (PANA)--The fourth ordinary session of the PAN-AFRICAN NEWS AGENCY [PANA] Intergovernment Council [IGC], which began in Dakar on Monday, continued its deliberations yesterday with a debate on the report on the agency's 1984-85 activities made by its director general. The report touched upon technical, information, and financial issues.

According to PANA Director General Cheick Ousmane Diallo, the essential efforts of the agency in the technical fields were aimed at improving its transmission conditions. In this connection, he said that the agency's telecommunications network was affected by uncertainty resulting from its radio transmission system. As a matter of fact, even though shortwave transmission is received with good reception by some 20 countries, atmospheric interferences considerably limit the exploitation of radio links.

He also recalled that the regional bureaus were still not used as transit links for information from the agencies of the member countries in the various subregions, adding: This makes irrelevant the configuration of the PANA telecommunications network, and as a result the equipment program for its regional bureaus. In this regard, the director general suggests that the IGC should in the future decide whether all the equipment installed in these bureaus will be maintained or will be redistributed to some national agencies which do not have such equipment yet. This would encourage them to participate in PANA's activities.

Mr Diallo also spoke of a satellite system which would unify Africa. He said the implementation of such a project known as the "shower system" implies the use of the satellite which are now covering Africa and the installation of appropriate reception antennae in each member agency. According to Mr Diallo, the implementation of preferential fares for the press, and the provision of financial resources for the necessary equipment would make possible the implementation of this project on schedule in the PANA 5-year development plan submitted to the current IGC session.

Speaking on the computerization of the agency, the director general of PANA indicated that it was already being implemented thanks to the technical and financial support of UNESCO, the International Telecommunications Union and

some donor countries. In this regard, he recalled that the International Program for the Development of Communications, IPDC, donated \$80,000 and UNESCO has placed at PANA's disposal a data processor which has already taken up part of the administrative and financial management of PANA.

The project to computerize the operations of the agency, the director general stressed, is aimed at speeding up the method of processing and transmitting news. It will also increase PANA's data storage capacity, improve the production quality of PANA and its member agencies, which will then have more background materials with which to write their press articles. It will also reduce the operating costs of the agency.

In the field of news, Mr Diallo pointed out that this department has fixed its daily production at 20,000 words in the two languages--French and English--in which the dispatches are received.

The setting up of a production schedule with a set of priorities has allowed for the diversification of the news services by orienting them more toward news on development. Thus specialized news items are transmitted during the week: economic news bulletin (Mondays); science and technology news (Tuesdays); news on drought (Wednesdays); and a review of the African press (Saturdays). Other news items on culture, sports, and health will soon be added to this schedule, and will be transmitted on Thursdays, Fridays, and Sundays.

The news department also transmits two feature articles a week, and special reports, all of which is generally geared toward the decolonization of news items, the situation in southern Africa, pan-Africanism, activities of non-governmental organizations, the women's decade, and so on...

Concerning finance, Mr Diallo indicated that contributions from member countries have constituted the only source of revenue of PANA as far as its operating costs are concerned. According to the director general, the total contributions received from member countries in 1984 was almost the same as that received each year since 1979.

Mr Diallo, whose term of office as director general of PANA ends this month, paid tribute to UNESCO, and particularly to its director general, Mamadou Mahtar Mbow, for its decisive contribution for turning the dream of PANA into a reality.

CSO: 5500/152

INTER-AFRICAN AFFAIRS

PANA SESSION CONCLUDES; RESOLUTIONS APPROVED

AB312230 Dakar PANA in English 1715 GMT 31 May 85

[Text] Dakar, 31 May (PANA)--The fourth ordinary session of the Intergovernmental Council (IGC) of the PAN-AFRICAN NEWS AGENCY (PANA) completed its work in the early hours of this morning with the unanimous approval of a series of resolutions on the work of the agency for the immediate future.

A resolution on information matters praised "the active participation of PANA in the coverage and dissemination of news of southern Africa, the Frontline States and on the problems of drought and famine." The activities of the agency, it continued, "conforms to the vision of the founding fathers of the OAU and PANA in promoting African unity and the African liberation struggle."

The resolution called on all OAU members to "make a more active interest in the affairs of PANA," and to accede to full membership of the organisation. It stressed that all those countries in arrears of contribution to the continental news agency should settle their debts so as "to enable the agency to make unhindered progress in facilitating the flow of African information the world over."

This call was repeated in a resolution on financial matters which also asked member states to give PANA all the necessary material and financial support for the achievement of its objectives.

This resolution also noted that "the funds of the agency have been managed with prudence and due respect," and urged the director general "to continue to manage the funds of the agency with rigour."

In the resolution the IGC also formally adopted the budget for the 1986/87 biennium as submitted by the financial committee. This makes an appropriation of 3,607,369 U.S. dollars for 1986, and 3,701,222 dollars for 1987.

A resolution on administrative matters extended the mandates of the PANA Advisory Committee on Recruitment and the Finance Committee for a further year. It called on the committee "to review the organigramme [as received] on PANA with the director general with a view to determining the priorities in the recruitment of staff and thereafter to proceed to the selection of staff."

On technical matters, a resolution was passed requesting the PANA director general to take the necessary steps to enable the agency to develop its telecommunications network so as to improve coverage of the continent and to pursue the objectives laid down in the five-year development plan discussed earlier in the week. These include the computerization of PANA's operations, and eventual access to a satellite network.

The resolution urged the OAU to request URTNA (Union of African National Radio and Television Networks), PATU (Pan African Telecommunications Union) and PAPU (Pan-African Postal Union) to complete their study of the African satellite. The OAU was also asked "to take necessary measures for the completion of the PANAFTEL project."

A final resolution called on the director general in negotiating agreements with non-African agencies "to bear in mind the need to make PANA commercially viable and to pay particular attention to PANA's status as a continental news agency.

It also authorised the director general to sign those headquarters agreements which are ready for signature between PANA and the host governments of the agencies' regional pools, and to continue negotiations on those still under consideration.

Last night, the headquarters agreement for the southern African regional pool, based in Lusaka, was signed by the PANA director general, Cheick Ousmane Diallo, and by the Zambian minister for information and broadcasting services, Cosmas Chibanda.

The IGC discussed at length the report by the rapporteurs of the meeting, and whether it gave an accurate account of deliberations. There was insufficient time to conclude this discussion, and so the IGC chairman, Zimbabwe's Information Minister Dr Nathan Shamuyarira, promised that he would work through the whole report with the rapporteurs to ensure that it reflected the spirit of the meeting.

At the conclusion, several delegates paid fulsome tribute to the work of Mr Diallo, whose term of office is scheduled to expire at the end of June. Dr Shamuyarira registered his "deep appreciation." Mr Diallo, he said, had "promoted the organisation from zero to what it is today, and future generations of Pan-Africanists will be indebted to him.

The Nigerian delegate praised Mr Diallo for "the dedication of a true son of Africa," while the Gambian delegate thanked the director for "his understanding and courage in taking up such crucial endeavour." Similar tributes were paid by the delegates from Egypt and Cameroon.

The final speaker to address the IGC was Eddie Ankongo of the Namibian liberation movement, SWAPO, who also spoke on behalf of the African National Congress (ANC) of South Africa. He praised the work undertaken by PANA in support of the southern African liberation movements.

"From its inception," he said, PANA committed itself clearly to supporting national liberation movements in order to get rid of the last remnants of colonialism on the continent."

Describing war-torn southern Africa as "a world of madness, a zone of death," he called on PANA and its member states to step up still further their coverage of the liberation struggles and their exposure of the evils of apartheid.

CSO: 5500/152

INTER-AFRICAN AFFAIRS

ZAIRIAN, ZAMBIAN MINISTERS ON VALUE, ROLE OF PANA

AB291312 Dakar PANA in English 0945 GMT 29 May 85

[Text] Dakar, 28 May (PANA)--Zaire's minister of information, Mr Ramazani Baya, has called for an evaluation of the impact of the PAN-AFRICAN NEWS AGENCY in the various national media of Africa. He said that by knowing the "true impact of PANA on the level of the national press," the agency would be able to judge the extent of its success.

Mr Baya, a member of the Intergovernmental Council (IGC) of PANA, was speaking today at the council's meeting in Dakar. He said that, although the agency's financial state revealed prudent management, "a certain boldness and audacity" could also have guided the utilisation of financial resources. He called for the establishment of functioning regional pools staffed with journalists who could help reduce the workload at the central headquarters in Dakar.

In his contribution, the Zambian information minister, Mr Cosmas Chibanda, said that Africa must not continue to lag behind "while the rest of the world is making impressive strides forward." Mr Chibanda said that African countries who are not yet members of PANA should join. "If PANA fails," he said, "future generations will condemn us."

The financial graph of the agency, he noted, had been slanting downwards. He appealed to African nations to reverse this trend by contributing their assigned quota to the agency's budget. Warning that Africa was "good at destroying," he told the IGC members to elect a new PANA director-general solely on merit. "We cannot afford to make any mistake," he declared. "If we do, history and our children will laugh at us."

CSO: 5500/152

MOZAMBIQUE

COOPERATIVE AGREEMENT SIGNED WITH HUNGARIAN TV

Maputo NOTICIAS in Portuguese 11 Apr 85 p 2

[Text] Mozambican Experimental Television (TVE) and Hungarian Television have now completed negotiations for the signing of a new agreement, thus continuing the cooperative arrangement initiated between the two countries in 1981. This information was given to NOTICIAS by a representative of that country's TV network who is presently in Maputo and was received yesterday by Information Minister Jose Luis Cabaco.

The new cooperative agreement, which will be signed in July in Budapest, includes the joint production of a film on Mozambique.

This is a renewal of the first agreement signed by the two organizations in 1981 which expired in 1984. "We felt the need to prolong cooperation with Hungary inasmuch as that cooperation has given good results and, as ascertained by both parties, was not just an idle claim," Pedro Pimenta, head of TVE, said in commenting on the cooperative agreement.

The Hungarian delegation, which spent a week in Maputo finalizing the terms of the new agreement, is made up of Bela Miklos Faludi, director of production, and Karoly Darida of the Department of Foreign Relations of that news media organization.

The first agreement consisted in the training of skilled personnel, technical assistance to TVE and an exchange of television equipment between the two countries. It was in this context that 3 Mozambicans spent 8 months in Hungary receiving technical training and Hungarian technicians spent time working at TVE.

The new agreement, which covers the 1985-1987 period, will provide for a continuation of the training of Mozambican technicians and the exchange of equipment produced in both countries.

The Hungarian delegation also advised that Mozambican and Hungarian national holidays are to be given special attention by the TV networks and that, in this connection, a special program on Mozambique will be presented in Hungary on the 10th anniversary of National Independence, 25 June.

The same occurred in Mozambique where, last weekend, TVE presented a special program commemorating the 40th anniversary of the liberation of Hungary.

Karoly Darida also said that it was in the spirit of the previous agreement that a Hungarian TV team came to Mozambique to compile a report on various aspects of our country's living conditions. "This report was given at a time when many people are watching television, and we estimate that at least 4.5 million people had an opportunity to learn something about your country," the Hungarian official said.

8568

CSO: 5500/140

NIGERIA

KANO STATE LAUNCHES FM RADIO STATION

Kano SUNDAY TRIUMPH in English 21 Apr 85 p 12

[Article by Musa Ilallah]

[Text]

ARDENT radio listeners in Kano will receive a further boost to their favourite communication medium when the Kano State Broadcasting Corporation, (KSBC) launches a new transmission station soon.

KSBC expects that its FM (frequency modulation) station will become a reality from mid-July this year, to introduce an innovation into its broadcasting service. The FM is mainly a musical station worldwide.

In an interview with *Sunday Triumph* last Wednesday, the Managing Director of the corporation, Alhaji Abubakar Adamu Dutse, said he was optimistic that "if fund is made available to us by the government, installation of the ₦1.9 million equipment for the station, which will last eight weeks would commence immediately.

According to the managing director, the proposal to

establish an FM station in the state was mooted about three years ago, by the ousted civilian administration. He said that the late arrival of the equipment had led to the delay in the take off.

On the establishment of the FM station at this time, Alhaji Adamu Dutse said: "The two 50 kilowatts transmitters will help in bringing the programmes of the radio station to the doorsteps of our listeners and above all generate more revenue from commercials."

The managing director also said that the present transmitters would be used for 'grassroot broadcast' mainly in the local language while the new transmitters would additionally be used for English language and higher level broadcast.

The FM stations, when operational, will have 14 substations spread evenly throughout the state with its control station at Jogana.

NIGERIA

BRIEFS

'MONOPOLY' OF MEDIA SCORED--The NEW NIGERIAN comments on the World Communications Day. It says there is nothing to write home about on the international information order since it was launched over a decade ago. According to the paper, the monopoly ownership of communications technology has enabled the developed nations to hold a monopoly over the world's print and electronic media. Equally sad, continues the NEW NIGERIAN, is the fact that all the favorable frequencies have been allocated to countries of the so-called First World and the Eastern world under the Soviet Union. The paper, however, blames this anomaly on African leadership which has done nothing to change the situation. It therefore suggests the integration of all the regional bodies in Africa to PANA, and a direct dialing telephone area. The NEW NIGERIAN also commends the Lagos Plan of Action to African countries which it says has enough of what is right on communications. [From the press review] [Text] [Lagos International Service in English 0830 GMT 22 May 85 AB]

'DIGITAL NETWORK'--An experimental operation of the (?model) of the integrated services telecommunications, digital network, will soon be introduced in the country. It is intended to provide subscribers with a variety of new services at low cost. The services will include data, facsimile, visual communications, in addition to telephone services. The minister of communications, Lieutenant Colonel Ahmed Abdullahi, announced this in a broadcast to mark this year's World Telecommunications Day. He said that a committee was already working on the formulation of strategy for the introduction of digital switching in the existing network. [Excerpt] [Lagos International Service in English 1630 GMT 17 May 85 AB]

CSO: 5500/148

SAO TOME AND PRINCIPE

BRIEFS

ENATEL HOPES TO IMPROVE--Communications. State telecommunications enterprise Enatel hopes to improve national telecommunications with technical assistance from the UN International Telecommunication Union (ITU). The African Development Fund (ADF) has agreed to lend \$1.9 million for the scheme, which will involve the supply and installation of radio and multiplex links, telephone cables and other equipment. [Text] [Paris AFRICAN DEFENCE in English May 85 p 16]

CSO: 5500/156

SENEGAL

TELECOMMUNICATIONS SERVICE TO BE RESTRUCTURED

AB121329 Paris AFP in French 0945 GMT 12 Jun 85

[Excerpts] Dakar, 12 Jun (AFP)--A restructuring of the post and telecommunication services through the creation of two national companies--one for telecommunications and the other for the postal services, savings bank, and postal checks--will soon be implemented in Senegal, official sources said in Dakar on Wednesday. According to the government plan, the National Telecommunications Company (SNT), whose establishment is envisaged, will embrace the National International Telecommunications Company of Senegal (TeleSenegal) and the Department of Telecommunications of the Post and Telecommunications Authority (OPT) charged with internal telecommunications. [passage omitted]

The plan envisages the connection of 15,000 new lines in Dakar, and the installation of a new communications antenna at the satellite earth station at Gandoul, near Dakar. The Senegalese program is being financed by several lending institutions: the World Bank, the West African Development Bank, the African Development Bank, the French Central Fund for Economic Cooperation, the Canadian Agency of Cooperation for International Development, and the Italian Government.

The second company, whose creation is envisaged, is a national company entrusted with the running of post offices and other establishments attached to them (savings banks and postal checks).

The proposed restructuring of the Senegalese post and telecommunications services led to public protests last week by the Union of Post Workers who organized a work-to-rule strike to protest against the risks of laying off of personnel. The call for the strike was withdrawn early this week after consultation with the authorities.

(S0: 5500/158

1 July 1985

SOUTH AFRICA

BRIEFS

SATELLITE FOR TELEVISION BROADCAST--The SABC has entered the space age and will use a telecommunications satellite for internal television broadcasts. The SABC, in co-operation with the Department of Posts and Telecommunications, decided to use satellite technology to connect programme sources with transmitters in isolated areas. An agreement is being signed with Intelsat to rent a transmitter on one of their satellites. The transmitter will make it possible to transmit one television channel (TV 1) and five radio services to the whole of South Africa, including Walvis Bay. At the present exchange rate it will cost about R3,05-million a year. The satellite is placed 36 000 km above the Equator and its rotating speed is more or less equal to that of the earth. [Text] [Pretoria SOUTH AFRICAN DIGEST in English 26 Apr 85 p 360]

3 NEW TV TRANSMITTERS--Three additional transmitters for TV 2, and TV 4 in Paarl, Stellenbosch, and Franschhoek, will start transmission tomorrow, a month earlier than scheduled. The first month will be a test period during which transmissions can be interrupted, and emergency repairs carried out without notice. [Text] [Johannesburg Domestic Service in English 1400 GMT 14 May 85 MB]

EDUCATIONAL TV--Broadcast times for educational programs on TV 1 are to be extended from 1 September. In a statement, the director general of the SABC, Mr Riaan Eksteen, says this has become necessary because of the great need for nonformal and informal education. Educational programs will be broadcast between 1300 and 1400 in the afternoon on week days, and repeated between 1130 and 1330 on Saturdays. In this way the present broadcast time of 120 minutes will be increased to 300 minutes a week. [Text] [Johannesburg Domestic Service in English 1600 GMT 9 May 85 MB]

CSO: 3500/144

USSR

20 YEARS OF SATELLITE BROADCASTING MARKED

PH231527 Moscow GOVORIT I POKAZYVAYET MOSKVA in Russian No 20, 8 May 85 p 19

[Interview with G. G. Kudryavtsev, USSR first deputy minister of communications, by correspondent Boris Fomin; date, place not specified]

[Text] Two decades ago on 23 April 1965, the Molniya-1 communications satellite was launched into earth orbit, and 2 days later, using this satellite, the first television transmission was carried from Moscow to Vladivostok.

In connection with this event, our correspondent, Boris Fomin, asked Gennadily Georgiyevich Kudryavtsev, USSR first deputy minister of communications, to answer questions contained in readers' letters:

Question. Gennadily Georgiyevich, before we take up the readers' letters, I would like you to talk about the way television broadcasting via artificial earth satellites began. Why was the "space option" chosen as the answer to the task of providing a nationwide television broadcasting system?

Answer. In our country, the growth in the population's access to television broadcasting has taken place in several stages.

From the first years of the development of television broadcasting up until 1967, the population was provided with television programs exclusively by means of ground facilities, through the construction of powerful television transmitters (between 1 and 50 kilowatts); and of medium- and low-power relay stations (of around 100 watts and between 1 and 10 watts, respectively).

In the early stages, the construction of the ground transmitting network was an efficient means: the stations were built in densely populated areas of the country, and each time one of them was commissioned, there was a considerable increase in the number of viewers.

In 1961, for example, 100 high-power and about 170 low-power television transmitter stations had been built in the country. These provided television to approximately 35 percent of the population. During the next 5 years, that is to say, up to the year 1966, the volume of television viewers amounted to just 20 percent. Thereafter, as television stations were commissioned in areas of low population density, the effectiveness

of the facilities being introduced began to sharply decline. Thus, in the ensuing 5 years through 1971, the volume of technical transmitting facilities again doubled, but this provided an increase of only 15 percent in the number of viewers. It became clear that it was not going to be possible to solve the set task in this way: At this rate more than 2,500 high-power television stations would have to be built in order to cover 95 percent of the population, and in turn, this would entail considerable capital investment, the construction of a large number of feeder lines, and a protracted time scale; at the same time, it would be practically impossible to cover 100 percent of the population.

Scientists of many countries have long shown increased interest in the problem of television broadcasting using artificial earth satellites. This interest was brought about by the fact that from a satellite situated at a sufficient altitude -- up to 36,000-40,000 kilometers -- it is possible to transmit signals, including television signals, to enormous areas of territory, up to one-third of the earth's surface.

This idea acquired a realistic foundation following the launch in 1957 of the first Soviet artificial earth satellite, and the beginning of the development of our national satellite communications systems and satellite television broadcasting was set in 1965 with the launch of the Molniya-1 artificial earth satellite.

The first 20 Orbita satellite communications receiving stations were commissioned in areas of Siberia, the Far East, Central Asia, and the Far North in 1967, by the 50th anniversary of Soviet power.

The commissioning of the first Orbita stations and the radio-relay lines from them provided an increase in the number of viewers of the Central Television program of more than 20 million people.

Question. V. Alekseyev, who lives in Novosibirsk, asks us to tell on the pages of our weekly how multichannel television broadcasting is currently carried out via the satellites. In particular, he wants to know what brought about the creation of two other satellite systems, the Ekran and the Moskva systems, in addition to the Orbita system?

Answer. The Orbita system was the world's first multiple stationary [mnogostatsionarnyy] television distribution system. However, the space technology capabilities existing at that time did not permit the creation of powerful satellites, and as a result, the cost of an Orbita ground station was extremely high. Construction of such stations was justified from the economic viewpoint only in major cities and population centers of no less than 50,000 people.

In fact, Orbita stations were built not just in major cities, but in relatively small centers with populations of between 5,000 and 10,000 people. This was done in the name of and for the benefit of the Soviet people.

Thereafter, however, the efficiency of building new Orbita stations as a means of feeding television programs sharply declined. The construction of stations in centers with populations of a few thousand people brought about a situation in which the expenditure per inhabitant ran into thousands of rubles.

Therefore, the task was set of creating new and much less expensive means that would make it possible to raise the efficiency and reduce the time scale of introducing television into the remotest points of the country.

The Ekran system met these requirements. The first Ekran artificial earth satellite was launched into a geostationary orbit in 1976. An experimental network consisting of 60 receiving installations had already been created by that time. The system's service area, within which reception of signals on the receiver installations is possible, covers an area of 9 million square kilometers, which amounts to about 40 percent of the entire territory of the country. It includes areas of Siberia, the Far North, and parts of the Far East.

The 0.7 gigahertz frequency band was chosen for the Ekran system. Its advantages are simplicity and low cost of ground receiver installations. The use of inexpensive transistor input amplifiers, of simple, multielement antennae of the Yagi type, and of an on-board transmitter of the maximum permissible capacity made it possible to obtain the high-quality characteristics of the television channel with low-cost receiver installations.

The Ekran system is being operated successfully, and its technical facilities have been used widely under the most varied conditions: in major population centers, in small settlements, and even by individual geological prospecting and research expeditions. Today, more than 3,000 installations of this system have already been established in the country, which has made it possible to provide television to areas practically inaccessible for ground-based television program feeder facilities. The network of stations continues to grow. At the same time, the equipment is being improved. For example, an input amplifier possessing a lower noise temperature is already being introduced; and the production of special antennae for areas with complex climatic conditions is being proposed.

Unfortunately, however, the use of this system in other parts of the country is impossible, since irradiation of the territory situated to the west and east of the existing service zone would entail exceeding the established international norms. This has required the creation of technical means of feeding television programs which are close in terms of both simplicity and efficiency for oblasts in the European part of the country, Central Asia, and the Far East.

In accordance with the set task, the new Moskva satellite television broadcasting system was devised and became operational in 1979 in the 4 gigahertz band, which was already widely assimilated, which made it possible to develop and to introduce the technical facilities of this system within a short time. The Moskva system is an addition to the Orbita and Ekran systems already in operation and opens up possibilities for the virtually complete coverage of the country with one Central Television program.

In order to set up the Moskva system, the special transponders [stvol'y] of a geostationary artificial earth satellite of the new Gorizont series were used, with the power supplied to the antenna input from the on-board transmitter increased to 40 watts. In combination with the highly directional on-board transmitter antenna, this ensures that the maximum effective radiated power permissible in this frequency band is obtained.

This made it possible to use on the Moskva ground receiving station an antenna with a comparatively small (2.5 meter) reflector. The technical design employed, which I have already described, made it possible to build a comparatively simple and small-sized station that does not require any capital structures and can be sited in any existing buildings or inside special containers. The power characteristics of the communications line in the Moskva system make it possible to have one high-quality television channel and two sound channels. The low-frequency television image and sound signals pass from the output of the station to the input of the transmitter, the type and power of which depend on the service zone required. The cost indicators of the Moskva station are approximately the same as the Ekran receiving installation and are such as to provide a cost-effective means of television broadcasting to a large number of population centers.

For the Moskva system to cover the territory of the USSR, it is planned to use four segments in space (four powerful transponders on Gorizont satellites) in geostationary orbit at 14, 53, 90, and 140 degrees east. To date, more than 500 Moskva stations have been manufactured in the country, and the network of them will be greatly expanded.

By making joint use of the network of Ekran, Moskva, and Orbita stations and radio-relay communications lines, it is possible to broadcast two Central Television programs throughout the whole territory of the USSR in five broadcasting zones, transmitting them at the times that are convenient for viewers.

Question. Our weekly magazine publishes the Orbita-4-Vostok television program schedule.

Ye. Romanenko from Sverdlovsk asks whether it is worthwhile to have the Vostok program which, as we know, is transmitted via ground radio-relay communications line, when the Orbita-4 program is transmitted to this zone via space.

Answer. The Vostok program was one of the first to be transmitted via ground communications lines from Moscow to other broadcasting zones in the Urals and Central Asia, and it covers a large television audience. The Orbita-4 program repeats the Vostok program and covers the same zone, but it is transmitted via satellite communications facilities (a Gorizont satellite and Moskva ground stations). Because only a small number of television transmitting facilities in the Urals and Central Asia zone are so far equipped with Moskva stations, a parallel version of this program is currently transmitted, with a 2-hour time shift, via both ground and satellite communications lines.

Question. A number of readers ask how the coverage area of the Second All-Union Television Program is going to be extended. To begin with, however, could you perhaps describe what it is proposed to do in the 12th Five-Year Plan in particular for that small percentage of people in the country who still cannot receive television and are waiting for the screens to light up in their homes?

Answer. Despite considerable progress in the field of television, not yet all the population of the country can receive television transmissions. Up to 5 percent of the population live in areas where it is currently impossible to receive television programs of high quality every day, and roughly the same number are unable to receive television broadcasts at all.

As the television network is developed and the conditions are created for the reception of, initially, one program, the demand arises for reception of a second, and then a

third program, of both Central Television and also the republic, kray, and oblast television studios. At the same time, the Central Television programs must be received at times which are convenient for viewers.

Expanding the television transmitting network and increasing the percentage of the country's population covered by television programs is one of the most important tasks facing the USSR Ministry of Communications, its scientific research and design institutes, and operating establishments.

The prospects for development of the material and technical base of television broadcasting in the 12th Five-Year Plan were defined in a resolution by the CPSU Central Committee and USSR Council of Ministers that was adopted in August 1984. The implementation of the targets defined in the resolution will ensure the further development of multiprogram television, increased automation of radio engineering equipment, and an improvement in the quality of television broadcasting.

At present, the Second All-Union Television Program is transmitted to all the broadcasting zones, from the western borders of the USSR to Sakhalin and Kamchatka, but the possibility of arranging for it to be relayed at any given point depends on a number of factors: availability of the right equipment, whether it is possible to install the equipment inside already operating television stations, whether it is possible to use antenna mounts, and so forth. These questions will be resolved as they apply to each individual high- and low-power television transmitting station.

The resolution I mentioned on the further development of the material and technical base of television broadcasting provides for a large work program to be carried out. At the same time, it must be realized that each percentage increase in coverage is obtained at the cost of enormous capital investment, major inputs of labor and material resources, and hard work by the country's many thousands of communications workers.

CSO: 5500/1022

USSR

DEPUTY MINISTER ON SATELLITE COMMUNICATIONS

PM161051 Moscow SOVETSKAYA ROSSIYA in Russian 7 May 85 Second Edition p 4

[Interview with Yu. B. Zubarev, USSR deputy minister of communications, by R. Kuznetsova: "The Planet's Communications"]

[Text] Nearly 30 years ago Zmeinyy Island, as this god-forsaken place was officially called, struck lucky. The physicists founded their city here, Dubna. Only 5 years ago, the International Center for Space Communications, Atlantic Region, appeared in Dubna, not far from the Joint Institute for Nuclear Research.

...The dishes of the parabolic satellite communication antennas are open to the bountiful rays of spring sunshine. Each of them is like a fantastic flower. Somewhere far away, at an altitude of 36,000 km above the Atlantic Ocean, hangs a communications satellite. It is "suspended" above the line of the equator, and hovers over the earth like a lark over a spring field.

Intensive work is in progress in rooms fitted with modern equipment and apparatus. Preparations are under way for a communications session to exchange television news with countries belonging to the international Intersputnik organization, and the work of ground stations located far away across the oceans, in other continents, is being monitored.

It was here in Dubna that I talked with Yu. B. Zubarev, USSR deputy minister of communications.

[Kuznetsova] Yuriy Borisovich, what is the role of satellite communications in providing television for our country's inhabitants?

[Zubarev] Television can be provided for the Soviet Union's numerous settlements most economically and rapidly only through use of a satellite television distribution system. This uses simple, cheap ground reception stations with small antennas. Their installation does not require major capital expenditure.

Let me remind you that the launch of the USSR's first communications satellite, Molniya-1, on 23 April 1965 caused a sensation. It enabled the inhabitants of Vladivostok to watch the May Day parade in Moscow's Red Square on their televisions. Only 18 months later, 20 Orbita ground stations were already in operation. They made it possible to transmit Central Television programs to regions of the Far North, the Far East, and Siberia. That is how the world's first national satellite television distribution system was created.

[Kuznetsova] Orbita, Ekran, Moskva -- these concepts have become a normal part of our life. Please tell us about these systems in more detail.

[Zubarev] Let me note that in the Ekran system alone the number of ground stations exceeds 3,000. Moskva unites around 300 such stations. By the end of 1990, their total number will have increased considerably.

Ekran and Moskva, combined with the Orbita satellite communications system and ground radio relay lines, ensure the transmission of Central Television programs across the country in five sessions and, let me note particularly, at a convenient time for the viewers.

That is why there is every reason to say today that in the near future practically the entire population of the Soviet Union will be able to watch Central Television programs with the help of satellites.

[Kuznetsova] What are the advantages of the satellite form of communications?

[Zubarev] The relay satellite makes it possible to link any points in our country, which makes this an essential form of communications in difficult geographical conditions where you have to cross stretches of water, mountains, forests, and marshes, where the construction of traditional ground lines involves great difficulties. As an example, let me cite the high mountain television stations in Kirgizia. They are located in inaccessible mountain areas and enable the republic's inhabitants to watch Central Television programs with the help of satellites.

This advantage of satellite communications makes it possible to say that the consistent development of this type of communications will enable us to provide two channels to the country's entire population. The volume of television and radio broadcasting via communications satellites -- the transmission of two Central Television channels and radio broadcasting -- is already in excess of 130 hours a day.

I would like to note the multipurpose nature of communications satellites. They are used widely for the transmission of newspaper pages to the country's printing plants, which speeds up their delivery to subscribers; they provide telephone communications between cities and settlements. Whereas the Orbita system was originally created as a network for the transmission of Central Television programs, it is now being supplemented by modern telephone equipment, becoming an organic part of the country's integrated automated communications system.

[Kuznetsova] We would like to know about the prospects for the development of satellite communications.

[Zubarev] The second generation of satellite communications will also be multi-purpose. They will ensure the transmission of television and radio programs and newspaper pages and the operation of telephone communications. They will be large-capacity artificial earth satellites with a high level of economic efficiency. The most progressive form will be the transmission of information via the new generation of satellites in digital form, which will improve the linking of satellite and ground channels and ensure the optimum coordination of all parameters of lines of communication.

CS0: 5500/1022

USSR

OFFICIAL VIEWS UN COMMUNICATIONS DEVELOPMENT PROGRAM

Moscow MOSCOW NEWS in English No 14, 14-21 Apr 85 p 5

[Article by Anatoly Karasikov]

[Text] The latest, 6th session of the Intergovernmental Council of the International Programme for the Development of Communication (IPDC) was held in March 1985 at the HQ of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in Paris.

After the USA abandoned UNESCO and ceased to be a member of the IPDC Intergovernmental Council, the body, which supervises the Programme's implementation, was left containing the following 34 members: Austria, Algeria, Antigua and Barbuda, Argentina, Bangladesh, Benin, Bulgaria, Venezuela, Gabon, the GDR, Zaire, India, Indonesia, Iraq, the Yemen Arab Republic, Canada, the People's Republic of China, Mexico, Mozambique, the People's Democratic Republic of Yemen, Nigeria, the Netherlands, Nicaragua, Norway, Cameroon, Peru, Senegal, the USSR, Uganda, the FRG, France, Sri Lanka, Ethiopia and Japan (in Russian alphabetical order - Ed.).

INJUSTICE

The existing dependence of the developing countries on their former metropolises in the field of information and communications inflicts damage not only upon these states but upon the entire world community as well. The initiators of setting up, the IPDC noted that even though the population in the developing countries comprises the greater part of the global population, the total circulation of the newspapers published there was only a sixth of the total newspaper circulation in the industrialized states. By 1980 eleven developing countries had no dailies at all, with only one newspaper being published in another 19 countries, and 35 countries had no information

agencies of their own. Many of the young states found themselves dependent on foreign information sources because quite often they had no personnel of their own, nor equipment, nor the means to purchase it.

UNESCO launched the International Programme for the Development of Communication in 1980 and it developed into one of the more successful of UNESCO initiatives, as was noted by the UNESCO General Conference and Executive Board at their latest sessions. The UN General Assembly also spoke highly of the work done on the restructuring of international relations in the field of mass communications on a new, democratic basis.

MEANS AND AIMS

The IPDC is of tremendous importance, in spite of its relatively modest

financial means, because it gives the green light to the creation in the Third World of independent mass media, organizes cooperation and assistance in developing the infrastructures of communications, and bridges the gap in this field between the industrialized and developing countries. Thanks to the IPDC, UNESCO and its organs, including the Intergovernmental Council of the IPDC, can study and objectively analyze the real state of the mass media in the developing states, follow the attempts made by the former metropolises to interfere in the internal affairs of the liberated states in the mass media field, render assistance to the shaping of the information policy of the developing countries in the spirit of peaceful coexistence and cooperation among nations, influence the distribution of international aid to the developing states in the mass media field, neutralizing the machinations of transnational corporations, and assist the establishment of the new international information order.

The IPDC meets halfway the just demands of the liberated countries to make the flow of information not only free, but also well balanced, so that the voice of the weak one would not be drowned in the powerful chorus of voices of those who would like to monopolize the shaping of public opinion. One of the main principles in the IPDC activities is the respect for the cultural identity of all nations, both large and small, and the unconditional joining in the UNESCO Declaration on Fundamental Principles Concerning the Contribution of the Mass Media to the Strengthening of Peace and International Understanding, to the Promotion of Human Rights and to Countering Racism, Apartheid and Incitement to War.

HELP THE POOREST

The 6th session of the IPDC Intergovernmental Council considered more than 50 practical regional and national projects, which include such major projects as developing the associations of information agencies in Asia (OANA), Africa (PANA) and Latin America (ALASEI), training of women specialists on the mass media in Africa, planning and developing radio broadcasting in Latin America, the strengthening of the mass media technical base in a whole number of countries, the setting up of a centre for training mass media specialists in the PDRY, the construction of a press

centre in Vietnam, and many other projects. The adopted projects are on the whole in accord with the IPDC aims and tasks. They were considered taking into account the criteria and priorities which were established by the Intergovernmental Council at its 2nd session in Acapulco (Mexico) in

January 1980 and which have not lost any of their relevance.

More than seven million dollars have been deposited in the special IPDC account which is the main source of financing the projects. Is this amount great or small? Of course it is not so much if we compare the figure with the developing countries' needs in the media field. It was noted at the session that many states which have previously voted for the appeal to support the IPDC, have themselves failed to respond to it.

Only a few industrialized capitalist states have rendered support to the IPDC through its special account. Among them Norway merits a special mention. Norway leads the list of donor countries (apparently, the result of the energy, enthusiasm and passionate involvement in the Council's affairs of its Chairman - Norwegian Gunnar Garbo). The IPDC special account was also supported to a certain extent by Canada, Finland, France and Italy.

Some industrialized countries have rendered assistance to the IPDC in other forms, approved by UNESCO (offers of specialists and equipment, aid in training national personnel, and fund in trust deposits under the control of an international organization), including many socialist states.

The joining of the "donors" by a number of developing countries, the aid to whom was envisaged by the IPDC, has become a notable phenomenon in its activities. In spite of their complex economic situation, they have also decided to render material support to the IPDC so that the money on the special account would be put at the disposal of the most needy countries.

Several new additional donations to the IPDC fund were announced at the Paris session. The IPDC's resources, however modest they are, are growing, wherein lies the token of the IPDC's further successes.

TWO POSITIONS

A US representative attended the 6th session. This time he sat not among the Council members but

among the public. The Washington emissary did not take part in official debates but compensated for this outward passivity by an energetic search for those who would agree to accept "aid" on the USA's conditions.

It is hard, in this context, not to recollect that at all the previous sessions of the Intergovernmental Council, the US delegation occupied a rather original position. When arguing about the distribution of the money on the special IPDC fund, to which the USA did not contribute a single dollar, it frankly displayed concern for only one quite definite category of receivers of the aid. The US delegates tried unsuccessfully many times to turn the IPDC into their own "data bank" on the needs of the developing countries in the field of the media so that large monopolies would be able to try to override more easily the mass media in the Third World.

As for the USSR, it unconditionally supports the IPDC aims and tasks, and was always against the rendering of aid within the IPDC context to be stipulated by any political conditions. The USSR has always taken this stand. It has always fulfilled all its commitments in full. As was stressed at the session, it will be fulfilling them as scrupulously also after its own financial fee to the UNESCO budget became the biggest among its members.

Taking into account the importance of the IPDC, the Soviet government decided to double its new fee to the IPDC fund made in October 1984 from 300,000 to 600,000 roubles. If the money donated previously is taken into account, the total monetary contribution of the USSR to the IPDC fund reaches 11 million roubles, including 550,000 roubles in hard currency. The question on how to realize the new monetary contribution by the USSR will be decided in cooperation with the IPDC directorate with account taken of the analysis of the concrete projects approved by the Intergovernmental Council.

On top of this, the USSR has offered the IPDC 30 scholarships for advanced students who have a higher specialized education and would like to improve their professional skills. These scholarships are for periods from one month to two years, in addition to the 50 scholarships which the USSR has provided the IPDC every year, since 1982, for students from the developing countries to acquire a higher education in Soviet higher schools. We have not summed

up the total which our country will pay for the training and advanced training of specialists on IPDC scholarships. But it will be, of course, quite a sizeable sum.

The Paris session was the last before the holding of the UNESCO General Conference in Sofia. There is good reason to believe that the IPDC will arrive at the Conference with good results.

CSO: 1812/247

EUROPEAN AFFAIRS

EFFORTS TO MERGE ITALTEL, CIT ALCATEL, SIEMENS, PLESSEY

Rome IL TEMPO in Italian 26 Jan 85 p 20

[Text] The first step has been taken toward a European giant in the telecommunications field, a giant the size of the U.S. company, American Telephone and Telegraph (AT&T): this is the sense of the agreement (reported in those columns) concluded Thursday between our ITALTEL, the French CIT Alcatel, the German Siemens and the British Plessey. If the four companies join they will represent an entity the size of AT&T and a market share of 26 percent, only two points below that of the American giant (28 percent).

Unlike automobiles which can travel the roads of all four countries of the four companies and which may be admitted with slight modifications in each of the four countries, the telephone exchanges are the result of a historical and technical development which differs from one country to the next, and where the principal concern has been the technological streamlining of the exchanges and, more recently, the effort to create systems which make the various exchanges compatible from country to country. At present the situation is such that, for example, in no case is there any economic advantage to adapting an Italian telephone exchange to the French standard, or vice versa.

The "flight plan" of the "four giants" of European telecommunications is directed toward the following three points: 1) definition and production of common portions of new telephone exchanges; 2) the definition of homogenous standards; 3) as a consequence of the two preceding points, to stimulate a broader opening of the market. What will the practical consequences of the agreement be for the European telephone user? In the long run inter-European service will be improved and, at least in theory, the rates should decline as a result of the standardization of plants. But these hopes should be considered only in the very long term and as theoretical, whereas an increase of employment in the telecommunications industry as a consequence of the greater export capacity of the so-called "European AT&T" is a closer and more concrete likelihood.

In this group the role of Italy is all the more challenging since the ITALTEL product, that is the TU line of digital exchanges and in particular the "UT 10/3" (a basic element of the national system for public electronic switching presently underway) is considered to be in the technological forefront of the avant garde worldwide. At present the most widely used system is the French CIT Alcatel

"E 10" but it cannot be considered technologically advanced. Plessey Telecommunications is the top order of "System X," a digital exchange which will characterize the "British Telecom" network. Finally Siemens is putting the finishing touches to the "EWSD," a modern exchange.

As to dimensions and capacity, it should be recalled that at the end of 1984 ITALTEL had some 20,250 employees, and a sales volume of some 1,200 billion lire. Siemens is the biggest European producer and the third biggest in the world of public telecommunications systems. Its sales volume for 1984 was the equivalent of 24,800 billion lire and it has some 320 thousand employees. CIT Alcatel has 56,000 employees. The company is integrated in the CGE group which in turn is a part of Alcatel Thompson, the biggest French telecommunications company and one of the five biggest in the world.

The sales volume for Alcatel Thompson in 1983 was 4,400 billion lire. Finally Plessey is a real empire with its capital in London and with interests which extend from telecommunications to space and defense systems. Plessey Telecommunications and Office System is the most important company of this multinational corporation. In 1983-84 the sales volume of the group was approximately 3000 billion lire and it employed 35,000 persons.

12425

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FINLAND

AGENCY TO PARTICIPATE IN EUROPEAN COST-214 PROJECT

Helsinki UUSI SUOMI in Finnish 26 Mar 85 p 26

[Article: "'Cost' Cooperation in Communications' Finland to Join in Study of Telecommunications Network of the Future"]

[Text] By means of a European study project in which England, Holland, France, Sweden, and Denmark will take part along with Finland an attempt will be made to improve the ability of the domestic communications industry to compete internationally.

The Post- and Telecommunications Office, the State Technical Research Center and the Finnish electronics industry will participate over the next 3 years in European technological cooperation through the research project "Cost 214."

"Through the project we are attempting to create a capability for the domestic communications industry to manufacture products that can compete internationally for the telecommunications network of the future," says inspector general Makku Kavonius of the Ministry of Commerce and Industry.

At the same time a research and development project has been prepared within the Post- and Telecommunications Office which aims at construction of an experimental multi-purpose optical network in Kouvola in 1988. The project also has great industrial importance, and it is expected that the Finnish electronics industry will participate broadly in it. This would include, among others, Nokia Electronics, Tlenokia, Salora and Teleste.

Many-sided Inquiry

The main goal of Cost 214 is to coordinate and promote various aspects of European research on multi-purpose communications networks. Research done under the project will cover demand models for communications-network services, planning methods for networks and models for evaluating their performance capabilities.

These models can be used as the basis for planning multi-purpose communications networks in Europe.

The similar project of the Post- and Telecommunications Office in Finland arose as the result of cooperation among the Technological Development Center, the Ministry of Commerce and Industry and the Ministry of Transportation.

The cost per country of the European project has been estimated at a total of 720,000 markkas.

9611

CSO: 5500/2640

FINLAND

GOVERNMENT ACTING TO REVIVE TELE-X PROJECT

Helsinki HELSINGIN SANOMAT in Finnish 4 May 85 p 9

[Article: "Finland Invests Almost 100 million: Compromise Solution on Tele-X Financing Being Developed"]

[Text] The Finnish government now believes strongly that agreement among the Nordic countries on financing the Tele-X television satellite project will be achieved soon. The government's ministerial committee on information policy decided on Friday to present to the other Nordic countries Finland's proposal for rental and usage costs for the Tele-X. The matter is to be decided on the basis of Finland's proposal in the ministerial meeting to be held in Lund, Sweden, on 19 May.

On Friday the government did not want to unveil the contents of its cost proposal. Information was leaked to the effect that Finland has raised its share of the costs, and it is ready to pay altogether nearly 100 million markkas as its share of the satellite tests for 3 years. In that figure are included rental and usage costs of the Swedish-built satellite, costs of translating the programs, plus construction and usage costs of the ground station.

If satellite cooperation is achieved, Finland will have to pay still more, since the cost of copyright permissions, production of new programs and transmission rights are not yet known. Some sources estimate the total cost at 150 million markkas.

The reason for the government's optimistic estimates may be that there is already some kind of preliminary agreement with Sweden on Tele-X monies. This was made a couple years ago, when Sweden's Minister of Education visited Helsinki quietly to negotiate with Matti Luttinen (Social Democrat), Minister of Transportation.

According to some information, Finland has agreed to increase its share over its previous offer by 5 million markkas a year of 15 million markkas over a 3-year period. It is true, however, that Finland has not yet made an official offer.

According to Transportation Minister Luttinen Finland intends to make a presentation about its proposal to the others before the Lund meeting, so that the others can formulate their own positions.

According to the government statement, Finland still requires clarification with the other Nordic countries on whether satellite tests can be financed through commercials or pay TV. The request for this kind of clarification is thought to be mainly the idea of the Ministry of Finance. The Ministry demanded a whole lot of clarifications in the government's Friday meeting, but advertising will hardly finance the Tele-X, because in the other Nordic countries besides Finland, there is no TV advertising. The funds will probably be taken from the national budget, but income from license fees is still being considered.

In the Lund meeting Finland will be represented in negotiations by Gustav Bjorkstrand (Swedish Party), Minister of Culture, who has visited the Nordic capitals recently on behalf of the Tele-X matter and Transportation Minister Luttinen. If there is agreement on financing, the Tele-X agreement will be brought before Parliament for approval. Parliament will also have to approve the money needed for its budget.

Finland's costs are based on the assumption that Denmark will not participate. Denmark's participation would reduce Finland's share. If, in addition to Denmark, Norway should also drop out, the whole experiment will be canceled.

The Tele-X satellite will be launched in 1987. It is to transmit Nordic TV programs for a test period of 3 years. Finland has not yet committed itself to any permanent satellite activity.

The government considers the Nordic satellite test to be in principle such an important project that Finland should not finance it in the face of opposition from the Ministry of Finance on cost questions.

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CSO: 5500/2640

FINLAND

DEBATE OVER TELE-X FUNDING, ADVANTAGES CONTINUES

Helsinki HELSINGIN SANOMAT in Finnish 2 Jun 85 p 28

[Article by Riitta Anttikoski: "Are Billions Being Squandered on Tele-X?"]

[Text] The Nordic Countries Council of Ministers, which deals with television matters, is to continue negotiations on Tele-X costs in less than 2 weeks time. The Ministerial Council will meet in Helsinki on 14 June and Communications Minister Matti Luttinen's (Social Democrat) compromise proposal is to serve as the basis for negotiations.

"We are not only going to continue with the negotiations, rather we hope that a decision will also be produced," Ministerial Council chairman Culture and Science Minister Gustav Bjorkstrand (Swedish People's Party) interpreted their goals.

If a decision is forthcoming, Finland will be committed to 3 years of satellite testing. If the trials are successful, programs designed for Sweden, Norway, Finland and Iceland will be transmitted via satellite for direct reception on two channels.

The ultimate costs of the Nordic countries option are not yet known. Those who are most pessimistic estimate that the project will cost each country hundreds of millions of markkas during the trial period alone. They have not yet determined where they will get the funds for testing and later for actual telecasts.

Education Ministers Enthusiastic

About 10 years ago Nordic education ministers got enthusiastic about a joint Nordic satellite that would transmit programs for direct reception. The years have not dampened their enthusiasm; they have only changed the details of the project.

Begun as a joint Nordic venture, at the end of the past decade Nordsat was shoved beyond the horizon. At the same time the right hand of the Swedish space industry, Rymdbolaget [Space Company] -- which played a key role in the research on Nordsat -- threw in Tele-X in its place.

The project has also been construed such that Sweden has disguised Tele-X, its space industry's development and employment project, under the cloak of a joint Nordic cooperative venture and, using economic and political channels, is now insisting that Norway, Finland and Iceland fund its tests, which will cost billions.

The chairman of the committee of officials who are making the preparations for the Ministerial Council meeting, LL.D. candidate Jukka Liedes, an official adviser to the Education Ministry, assured us that in the negotiations they operate on the premise "that Finland will not pay for Sweden's industrial policy solutions. But, on the other hand, it is clear that, if a system is established, we will certainly pay the price that has to be paid."

Denmark has remained an outside observer the whole time. "Denmark will discuss Tele-X as soon as the other Nordic countries (Sweden, Norway, Iceland and Finland) have approved the costs of the trial period," Ministerial Council chairman Bjorkstrand believes. He bases his opinion on the "round of Nordic shuttle" discussions in Denmark last April.

Sweden Striving to Be in the Front Ranks

Nowhere is there as yet a satellite in operation that transmits programs for direct reception. The Japanese have tested such satellites with varying success. Enthusiasm over them has died down in the United States as well.

In Europe five proposals for the procurement of satellites that transmit programs for direct reception are under consideration. The Federal Republic of Germany and France's satellites are being built. Sweden's Tele-X, in the construction of which Swedish industry will also participate, is a derivative of the German and French projects. They will probably attempt to fire the German satellite into orbit before the year is out. Next year it will be France's turn. Tele-X is scheduled to go into orbit on 27 February 1987. In addition, the European Space Organization's Olympos satellite and England's satellite may be fired into orbit that same year.

The designing, construction and placing into orbit of Tele-X along with the guidance and control stations cost over a billion (over 1.5 billion markkas in today's currency) during the agreement-reaching phase. According to the bilateral agreement between Sweden and Norway, Norway participates in it to the extent of about 15 percent. According to the Swedish-Finnish agreement, Finland participates in the construction costs to the extent of about 4 percent, or 45 million markkas. Most of these expenses have already been paid for. The funds have been and are being provided by the Trade and Industry Ministry and the Technological Development Center.

Chief inspector Per-Hakan Slotte of the Trade and Industry Ministry reminded us that 25 million markkas of these costs are returned to Finnish industry as orders for merchandise, which consists primarily of equipment needed for the ground stations.

Now they are arguing and negotiating chiefly over what potential satellite users should pay in terms of rent during the trial period and of the other joint Nordic country expenses. Two data communications channels and three television channels are planned for the satellite.

Data communications issues have been overshadowed by the dispute that has arisen over the television channels. Indeed, with the exception of Sweden, the Nordic communications services have reacted coolly to the Tele-X project. They are already participating in intermediary satellite systems. Via intermediary satellites, which require big receiving antennas, we receive Sky Channel and the French satellite programs, among others, in Finland.

Millions Flying About

There will be three television channels on the satellite, but only two will be simultaneously in operation and one will be in reserve. According to the latest plans, one channel will emphasize culture and entertainment and the other news and current events.

At first, Sweden tried to collect a total of 450 million kronas, or over 300 million markkas, as a rental fee for the trial year for the three television channels. Later it lowered its demand to 292 million markkas. Sweden would be prepared to pay 40 percent of that and the rest would be divided up among Norway, Iceland and Finland. Finland's share was scheduled to be 24.7 percent, or about 73 million markkas.

The Norwegians made an offer they considered to be fair, 135 million markkas, or the same amount that would release the same number of channels from intermediary satellites for 3 years. If the same basis for dividing up costs were adhered to, Finland's share would be less than half the amount demanded by Sweden, or about 34 million markkas.

After the Nordic Council conference in Reykjavik in March, Finland launched the so-called Luttinen Tele-X initiative. They will be negotiating on the basis of it in less than 2 weeks from now in Helsinki.

The drafting committee for the Helsinki conference will meet in Copenhagen tomorrow. Attending it will be one representative from each Nordic country as well as a Danish observer. The chairman of the Yleisradio [Finnish Broadcasting Corporation] communications development committee, LL.D. candidate Kaj-Peter Mattson, who is also "on loan" at the Communications Ministry as secretary of the satellite committee, will participate in the conference for Finland.

The actual officials' drafting committee will meet in a little over a week from now on Tuesday, 11 June, in Oslo. The committee chairman is Jukka Liedes, an official adviser to the Education Ministry. Participating for Finland in addition to him are official adviser Hakan Mattlin of the Education Ministry, department head Kai Tornblom and senior government secretary Hannele Tuomi of the Communications Ministry and Yleisradio's joint representative, and special chief inspector Per-Hakan Slotte of the Trade and Industry Ministry.

In addition to the chairman, Minister Bjorkstrand, Communications Minister Matti Luttinen and Trade and Industry Minister Seppo Lindblom (Social Democrat) will participate in the Helsinki conference of the Council of Ministers.

While a decision in principle on the rental rate will be produced at the Ministerial Council conference, a number of other issues are still to be resolved. Parliament will make the final decision on Finland's participation.

Who Is to Pay?

In Finland it has not yet been determined who is to pay for the testing, especially if this is the first step in an operation that will devour millions, or what viewers who have bought the expensive equipment needed to receive satellite telecasts will do if satellite telecasts end with the trial telecasts.

Communications Minister Matti Luttinen mentioned four funding sources: radio funds, or the income from license fees, funds taken directly from the national budget, subscriber fees (pay TV) or income from advertising.

The hike in license fees that is being contemplated to protect the maintenance of and improve Yleisradio's current operations is in Minister Luttinen's care; the Council of State has not yet discussed it.

Or will Finland's share of Tele-X be funded by the third channel planned by Yleisradio, MTV [Commercial TV] and the Nokia Company, which is also based on subscriber fees?

"I don't see any direct connection between these two projects. A third channel has in general only been discussed on a principled level," Lauri Sivonen (Social Democrat), vice chairman of the Yleisradio advisory board said.

Those most pessimistic speak of hundreds of millions despite the fact that the trial period rental fee would be between the from 34 to 73 million markkas of Norway's offer and Sweden's demands, perhaps 50 million markkas. To be added to that are other joint Nordic costs like translations and such, Finland's share of which would be about 20 million markkas. At least 50 million markkas would go into actual program activities.

Twenty million of the construction costs will be left on the pile of millions after the orders received by Finnish industry. To that must be added the costs of providing antennas for individual households.

Those who are not within range of a cable network or common antennas and want to watch satellite telecasts will have to procure additional equipment: a paraboloid reflector and the modulation transformers that go with it. They will probably cost from about 4,000 to 5,000 markkas. They are not yet being manufactured industrially. If, for example, 10,000 households buy their own antennas, over 50 million in installation costs will be sunk into them.

According to Sweden's plans, after the trial years the satellite will be turned over to Notelsat, an operational corporation founded for the purpose, because of its value as a communications medium. Open is the question as to who will determine its value and whether the satellite is at that time still in orbit at all and whether it is functioning or whether a second satellite has been placed in orbit, etc.

Precisely for these reasons new disbursements of millions, even hundreds of millions will be initiated.

Will Finland be able to free itself from a continuation of these outlays if cooperation becomes too expensive?

"During the first two trial years we will determine what the chances are of continuing with satellite operations," Minister Bjorkstrand said. He interprets the generation of even a preliminary agreement as an effort to continue satellite operations. But he feels that price comparisons are a prerequisite for continuation.

Even if an agreement to continue operations should not be generated, it [the satellite] will be of use for receiving services. You see, Bjorkstrand does not believe that the satellite will be left silent in space, but that it will telecast either Nordic or Swedish programs.

"By then there will also be other satellites in space transmitting direct reception programs. In Europe they have by no means abandoned satellite projects involving transmission for direct reception in favor of intermediary satellites," he assured us.

To be sure, the technical experts say that Tele-X antennas are too small in size to pick up European satellites transmitting for direct reception. Finland is not in their regular radiation cone or target area.

All the same, television programs from the Nordic countries can be received in Finland otherwise than via Tele-X. For example, heavily into cable operation, Norway has already confirmed the fact that they will be viewing Swedish television programs as of next fall. It receives them via the intermediary satellite, from which Norway has leased two channels and its own television system distributes them through cable networks.

Households that watch Swedish television programs pay about 35 markkas a year in copyright reimbursements. Its own television system collects from about 180 to 325 markkas from the distribution as membership and distribution fees.

"In Finland we have not yet discussed a similar solution. It will be an alternative worth considering only after and if the Tele-X negotiations founder," Bjorkstrand thought.

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CSO: 5500/2653

NORWAY

TELECOMMUNICATIONS AGENCY SOON SELF-FINANCED

Oslo AFTENPOSTEN in Norwegian 14 May 85 p 40

[Article: "Televerket Soon Self-Financed"]

[Text] The operating profit of Televerket [government institution having administration of telephone, telegraph, radio and broadcasting services] increased by 23 percent to 1.43 billion kroner in 1984. 1.25 billion kroner are set aside for investment purposes. Televerket itself now finances 85 percent of the investments, and the goal is 100-percent self-financing in 1990.

According to managing director Kjell Holler, productivity development in the company is the reason one has managed to make Televerket into a profitable enterprise. For the fourth year in a row, Televerket has had a productivity increase--measured by the relationship between income and operating expenses, including pensions and writeoffs--of more than 4.5 percent.

More efficient collection of delinquent accounts is one of the reasons for growth in profits. New payment arrangements will yield a profit of altogether 600 million kroner over a 3-year period.

Business income increased by 13.2 percent to 8.92 million kroner in 1984. The gain is due to an increase in postal services and subscriptions as well as a rate hike which started 1 January 1984. In connection with the 1986 budget, Televerket's board of directors has suggested that the rates should be lowered, and the long-term objective is to bring the rate level down. Ninety percent of Televerket's revenue comes from telephone service.

According to managing director Holler, Norway is in the process of removing itself from the European peak when it comes to average real costs for the telephone. Based on the rates of January 1985, an ordinary industrial worker has to work 50.6 hours to cover them. Austria, France and Great Britain are now in front of us on the cost peak.

Televerket's technical experiments in transmitting Swedish television via the European Communications Satellite (ECS 1) began yesterday. Satellite transmission will make it technically possible for cable-TV subscribers all over the country to receive Swedish television.

12327

CSO: 5500/2648

NORWAY

COMPUTER FIRMS OPPOSE GOVERNMENT AGENCY ROLE IN SECTOR

Oslo AFTENPOSTEN in Norwegian 28 May 85 p 40

[Article by Ulf Peter Hellstrom: "Data Processing Leader Critical of Televerket's New Role"]

[Text] "By no means do the private data processing suppliers fear new competition from Televerket [government institution having administration of telephone, telegraph, radio and broadcasting services] after Storting treatment of the telecommunications market. I continue to believe, however, that Televerket should concentrate mainly on developing the telecommunications network," says Honeywell Bull, Inc, administrative director Gunnar Garo, who has become involved in the debate surrounding Televerket because he has been chairman of the National Society of Office Work and Data Processing.

This association is a professional body for the private data processing and office suppliers in Norway. Many of them are Norwegian subsidiaries of large foreign concerns. This group has been skeptical about letting Televerket acquire an organization which will be competitive with private suppliers in new areas. There is a majority in favor of just this in the Storting, however.

"I continue to feel that Televerket ought to stick to its customary tasks. Why should Televerket now sell equipment to customers in competition with private, established suppliers? It is as if the Highway Department should start selling cars here in this country," thinks Garo. He also repeats his skepticism concerning the owner relationship for the new competitive organization which, for the time being, is set up in the project organization Televerket Domestic Industrial Communications (TBK). "Televerket should not own TBK, which instead ought to be placed under the Ministry of Industry," feels Garo.

Garo directs a company which counts on surpassing its budgeted growth this year, so that sales will reach a magnitude of 240 million kroner. Profits in the first half-year were 7.2 million kroner. Fifty-three percent of the budgeted number of orders were recorded before the end of April.

The growth in sales from 1983 to last year was 32.3 percent. The Norwegian subsidiary is thus one of the companies in the Bull group of France which shows the strongest growth internationally. The company has signed agreements with customers such as Norwegian Ironworks, the Post Office and the Police's Data Processing Service, while the Labor Directorate has chosen Bull data processing machines for its employment agencies because of a need for communications among the employment agencies.

The data processing company does a fair amount of work with so-called network solutions. The Norwegian subsidiary together with the Bull companies in Sweden and Denmark and the Finnish concern Nokia is planning the establishment of a Scandinavian center for data networks which Garo hopes will be located in Norway.

The experiences with the Jevnaker project--in which thousands of bank customers participate in an experiment with so-called smart bank cards with built-in memory of the transactions on the card--Garo goes so far as to describe as good. "The big banks will probably wait and see which international standards develop for using a magnetic payment card," believes the Honeywell Bull leader. "Magnetic stripe cards are at present the most widespread."

12327

CS0: 5500/2648

TURKEY

BRIEFS

TV TRANSMITTER IN RIZE--A 50-watt television transmitter has been commissioned in Rize's Derapazari subdistrict. Residents were told to set their televisions on band 3 and Channel 5. [Summary] [Ankara Domestic Service in Turkish 2000 GMT 17 May 85 TA]

OZAL SUPPORTS PRIVATE FM STATIONS--Ankara--Prime Minister Ozal would like to see private FM radio stations established that would broadcast only music and commercials. At a Ramadan dinner the other night, Ozal discussed this matter briefly with Tunca Toskay, director general of the Turkish Radio and Television (TRT) network. The prime minister suggested that the TRT law and the relevant provisions of the Constitution be closely examined from every angle. According to initial investigations, the establishment of a private radio station on the basis of existing law is impossible. Therefore, an effort is being made to link the TRT with private radios. Through such a formula, legal obstacles could be overcome, while bringing private radio stations under control. [Excerpt] [Istanbul CUMHURIYET in Turkish 6 Jun 85 pp 1, 11]

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